October 10, 2002

Re: 003 - 6925 - 00013 Phelps Dodge Magnet Wire
TO: Interested Parties / Applicant

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision - Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-6-1(b) require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, ISTA Building, 150 W. Market Street, Suite 618, Indianapolis, Indiana 46204, **within thirty (30) days from the date of this notice**. The filing for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) the date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision or other order for which you seek review by permit number, the name of the applicant, location, the date of this notice, and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for consideration at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

(over)

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of a Title V operating permit or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impractible to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency
Administrator, Christine Todd Whitman
401 M Street
Washington, D.C. 20406

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures

FNTVOP.WPD
8-21-02

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Frank O'Bannon
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.state.in.us/idem

PART 70 OPERATING PERMIT
OFFICE OF AIR QUALITY

Phelps Dodge Magnet Wire Company
4300 New Haven Avenue
Fort Wayne, Indiana 46803

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T003-6925-00013	
Issued by: Original Signed by Janet McCabe Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: October 10, 2002 Expiration Date: October 10, 2007

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates magnet wire coating processes.

Responsible Official:	David C. Booher, Vice President
Source Address:	4300 New Haven Avenue, Ft. Wayne, Indiana 46803
Mailing Address:	2131 South Coliseum Boulevard, Ft. Wayne, Indiana 46803
SIC Code:	3357
County Location:	Allen
County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Major Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

(a) Three (3) Quartz Fabric wire enameling ovens, installed before 1977, emission unit number 701-702, 703-704 and 705-706, with a maximum capacity of 33 pounds of magnet wire per hour each. Emissions shall be controlled by external thermal oxidizers (not integral) exhausted at Stack/Vent ID 0023.

(b) Two (2) Quartz Fabric wire enameling ovens, installed before 1977, emission unit number 707-708 and 709-710, with a maximum capacity of 33 pounds of magnet wire per hour each. Emissions shall be controlled by external thermal oxidizers (not integral) exhausted at Stack/Vent ID 0020.

(c) Four (4) Quartz Fabric wire enameling ovens, installed before 1977, emission unit number 804, 805, 808, and 809, with a maximum capacity of 80 pounds of magnet wire per hour each. Emissions shall be controlled by external thermal oxidizers (not integral) exhausted at Stack/Vent ID 0033.

(d) One (1) Quartz Fabric wire enameling oven, installed before 1977, emission unit number 810, with a maximum capacity of 80 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0024.

(e) One (1) Lepel Fabric wire enameling oven, installed before 1980, emission unit number 807, with a maximum capacity of 80 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent 0027.

(f) One (1) Lepel Fabric wire enameling oven, installed before 1980, emission unit number 806, with a maximum capacity of 80 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent 0028.

(g) One (1) Lepel Fabric wire enameling oven, installed before 1980, emission unit number 803, with a maximum capacity of 80 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent 0030.

(h) One (1) Lepel Fabric wire enameling oven, installed before 1980, emission unit number 802, with a maximum capacity of 80 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent 0031.

(i) One (1) Quartz Fabric wire enameling oven, installed 1992, emission unit number 811, with a maximum capacity of 80 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0024.

(j) One (1) SICME ES enameling oven, installed March 1991, emission unit number 695, with a maximum capacity of 90 pounds of magnet wire per hour. Emissions shall be controlled by an internal thermal oxidizer (not integral) exhausted at Stack/Vent ID 0066.

(k) One (1) SICME ES wire enameling oven, installed March 1991, emission unit number 690, with a maximum capacity of 90 pounds of magnet wire per hour. Emissions shall be controlled by an internal thermal oxidizer (not integral) exhausted at Stack/Vent ID 0068.

(l) One (1) SICME ES wire enameling oven, installed March 1991, emission unit number 605, with a maximum capacity of 90 pounds of magnet wire per hour. Emissions shall be controlled by an internal thermal oxidizer (not integral) exhausted at Stack/Vent ID 0069.

(m) One (1) SICME ES wire enameling oven, installed March 1991, emission unit number 600, with a maximum capacity of 90 pounds of magnet wire per hour. Emissions shall be controlled by an internal thermal oxidizer (not integral) exhausted at Stack/Vent ID 0071.

(n) One (1) Square/Rectangular wire enameling oven, installed before 1980, emission unit number 610, with a maximum capacity of 66.67 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0091.

(o) One (1) Square/Rectangular wire enameling oven, installed before 1980, emission unit number 640, with a maximum capacity of 66.67 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0113.

(p) One (1) Square/Rectangular wire enameling oven, installed before 1980, emission unit number 620, with a maximum capacity of 66.67 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0118.

(q) One (1) Square/Rectangular wire enameling oven, installed before 1980, emission unit number 670, with a maximum capacity of 66.67 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0122.

(r) One (1) Square/Rectangular wire enameling oven, installed before 1980, emission unit number 680, with a maximum capacity of 66.67 pounds of magnet wire per hour.

Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0133.

(s) One (1) Square/Rectangular wire enameling oven, installed before 1980, emission unit number 660, with a maximum capacity of 66.67 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0140.

(t) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 351-352, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0172.

(u) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 353-354, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0173.

(v) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 355-356, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0174.

(w) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 367-368, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0175.

(x) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 365-366, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0176.

(y) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 363-364, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0177.

(z) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 373-374, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0196.

(aa) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 371-372, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0197.

(bb) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 369-370, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0198.

(cc) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 357-358, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions

shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0199.

(dd) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 359-360, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0200.

(ee) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 361-362, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0201.

(ff) One (1) MAG VEL 6 wire enameling pilot oven with an integral internal catalytic oxidizer, installed November 11, 1993, and a maximum capacity of 133.33 pounds of magnet wire per hour. Emissions shall be exhausted at Stack/Vent 1041-1044.

(gg) One (1) MAG VEL 8 wire enameling pilot oven with an integral internal catalytic oxidizer, installed November 11, 1993, and a maximum capacity of 133.33 pounds of magnet wire per hour. Emissions shall be exhausted at Stack/Vent 1048-1051.

(hh) One (1) MAG HZ 4 wire enameling pilot oven with an integral internal catalytic oxidizer, installed November 11, 1993, and a maximum capacity of 133.33 pounds of magnet wire per hour. Emissions shall be exhausted at Stack/Vent 1053.

(ii) One (1) MAG VZ 6 wire enameling oven, known as No.1, with an integral internal catalytic oxidizer, emission unit number 301-309, installed late 1998 or early 1999, with a maximum capacity of 1,158 pounds of magnet wire per hour. Emissions shall be exhausted at Stack/Vent 0383-0388.

(jj) One (1) MAG VZ 6 wire enameling oven, known as No. 2 with an integral internal catalytic oxidizer, emission unit number 310-318, installed late 1998 or early 1999, with a maximum capacity of 1,158 pounds of magnet wire per hour. Emissions shall be exhausted at Stack/Vent 0389-0394.

(kk) One (1) MAG-VZ/5 oven with a maximum capacity of 1,146 pounds magnet wire per hour, consisting of three (3) nine (9) line machines, installed in 2000, equipped with two (2) integral catalytic oxidizers for VOC control, exhausted through stacks 398, 399, and 400, as well as cooling stacks 401, 402 and 403.

(ll) One (1) applicator cleaning area, installed January 1991 consisting of tanks 1 through 7, exhausted through stacks 0299, 0300 and 0301, capacity: 150 gallons each for tanks 1and 2, 650 gallons for tank 3, 500 gallons each for tanks 4 and 5, 400 gallons for tank 6 and 500 gallons for tank 7.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1 (21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour [326 IAC 6-2-4]:

(1) One (1) 7.54 MMBtu natural gas fired boiler, designated as Boiler 1, installed in 1971, exhausting at Stack/Vent 0218.

(2) One (1) 7.54 MMBtu natural gas fired boiler, designated as Boiler 2, installed in 1971, exhausting at Stack/Vent 0222.

(b) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment [326 IAC 6-3-2].

(c) Emergency generator as follows: Natural gas turbines or reciprocating engines not exceeding 16,000 horsepower: One (1) Cummins 395 HP natural gas emergency generator exhausting to stack 415. This is an insignificant activity with no specifically applicable requirements. (Equipment referenced in Condition D.10.2).

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5]

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

B.3 Enforceability [326 IAC 2-7-7]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.4 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.5 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Supplement and Provide Information [326 IAC 2-7-4(b)] [326 IAC 2-7-5(6)(E)] [326 IAC 2-7-6(6)]

(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit or, for information claimed to be confidential, the Permittee may furnish such records directly to the U. S. EPA along with a claim of confidentiality. [326 IAC 2-7-5(6)(E)]

(c) The Permittee may include a claim of confidentiality in accordance with 326 IAC 17. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Compliance with Permit Conditions [326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]

(a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit grounds for:

(1) Enforcement action;

(2) Permit termination, revocation and reissuance, or modification; or

(3) Denial of a permit renewal application.

(b) Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act.

(c) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(d) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

B.9 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.

(c) A responsible official is defined at 326 IAC 2-7-1(34).

B.10 Annual Compliance Certification [326 IAC 2-7-6(5)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ, may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

B.11 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The PMP and the PMP extension notification do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

B.12 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
(and local agency if applicable)

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

B.13 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable

requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.

(d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;

(2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

(4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

(e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(7)]

B.14 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either

(1) incorporated as originally stated,

(2) revised, or

(3) deleted

by this permit.

(b) All previous registrations and permits are superseded by this permit.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(c) Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ, determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.17 Permit Renewal [326 IAC 2-7-4]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management

Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

(b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]

(1) A timely renewal application is one that is:

(A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(2) If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

(c) Right to Operate After Application for Renewal [326 IAC 2-7-3]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.

(d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]
If IDEM, OAQ, fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

B.18 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12 (b)(2)]

(a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.20 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20(b), (c), or (e) and makes such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-7-20(b), (c)(1), and (e)(2).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326

IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

B.21 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by 326 IAC 2 and 326 IAC 2-7-10.5.

B.22 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy any records that must be kept under the conditions of this permit;

(c) Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) Sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)]

(a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ, the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAQ, Technical Support and Modeling Section), to determine the appropriate permit fee.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate Matter Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2. 326 IAC 9-1-2 is not federally enforceable.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission unit vented to the control equipment is in operation.

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited, pursuant to the provisions of 40 CFR 61, Subpart M, is federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.8 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

C.11 Maintenance of Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

(a) In the event that a breakdown of the emission monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less often than once an hour until such time as the continuous monitor is back in operation.

(b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

C.13 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

(b) Whenever a condition in this permit requires the measurement of a temperature, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

(c) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on February 27, 1998.

(b) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level.
[326 IAC 1-5-3]

C.15 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

(a) A compliance schedule for meeting the requirements of 40 CFR 68; or

(b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP).

All documents submitted pursuant to this condition shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.16 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and is comprised of:

(1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.

(2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.

(b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:

(1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or

(2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

(3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.

(4) Failure to take reasonable response steps shall constitute a violation of the permit.

(c) The Permittee is not required to take any further response steps for any of the following reasons:

(1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously

submitted a request for a minor permit modification to the permit, and such request has not been denied.

(3) An automatic measurement was taken when the process was not operating.

(4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.

(d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.

(e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

(f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.18 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

(a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:

(1) Indicate estimated actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);

(2) Indicate estimated actual emissions of other regulated pollutants (as defined by 326 IAC 2-7-1) from the source, for purposes of Part 70 fee assessment.

(b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

C.19 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

(a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.20 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

(a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(d) Unless otherwise specified in this permit, any quarterly report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

Stratospheric Ozone Protection

C.21 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(a) Three (3) Quartz Fabric wire enameling ovens, installed before 1977, emission unit number 701-702, 703-704 and 705-706, with a maximum capacity of 33 pounds of magnet wire per hour each. Emissions shall be controlled by external thermal oxidizers (not integral) exhausted at Stack/Vent ID 0023.

(b) Two (2) Quartz Fabric wire enameling ovens, installed before 1977, emission unit number 707-708 and 709-710, with a maximum capacity of 33 pounds of magnet wire per hour each. Emissions shall be controlled by external thermal oxidizers (not integral) exhausted at Stack/Vent ID 0020.

(c) Four (4) Quartz Fabric wire enameling ovens, installed before 1977, emission unit number 804, 805, 808, and 809, with a maximum capacity of 80 pounds of magnet wire per hour each. Emissions shall be controlled by external thermal oxidizers (not integral) exhausted at Stack/Vent ID 0033.

(d) One (1) Quartz Fabric wire enameling oven, installed before 1977, emission unit number 810, with a maximum capacity of 80 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0024.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Volatile Organic Compound (VOC)

(a) Pursuant to 326 IAC 8-6 (Organic Solvent Emission Limitations), the VOC emitted from the ten (10) Quartz Fabric wire enameling ovens, emission units 701-702, 703-704, 705-706, 707-708, 709-710, 804, 805, 808, 809 and 810, shall be reduced by at least eighty-five percent (85%).

(b) Any change or modification which may increase potential emissions from the ten (10) Quartz Fabric wire enameling ovens shall require prior approval from the OAQ before such change may occur.

D.1.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.1.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

Pursuant to 326 IAC 8-1-2(a), the Permittee shall operate the thermal oxidizers to achieve compliance with Condition D.1.1.

D.1.4 Thermal Oxidizer Operation

(a) Pursuant to the Construction Permit issued on October 17, 1997 (CP 003-8609-00013), the thermal oxidizers shall operate at all times that the ten (10) Quartz Fabric ovens are in operation. When operating, the thermal oxidizers shall maintain a minimum operating temperature of 621 degrees Celsius or a temperature, fan amperage, or duct pressure, determined in the compliance testing to maintain a destruction efficiency of not less than ninety percent (90%) of volatile organic compound (VOC).

(b) In order to satisfy the requirements of 326 IAC 8-6 and Condition D.1.1, the external thermal oxidizers must operate with a minimum destruction efficiency of ninety percent (90%) and a minimum capture efficiency such that the overall control efficiency is at least eighty-five percent (85%).

D.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.1.1, within fifty (50) months after issuance of this permit, the Permittee shall conduct performance tests to verify VOC control efficiency as per Condition D.1.3 for the thermal oxidizers using methods approved by the Commissioner.

(b) One representative thermal oxidizer from the two oxidizers controlling the ten (10) Quartz Fabric enamel ovens shall be tested. The thermal oxidizer tested shall be the oxidizer in which the longest amount of time has elapsed since its previous test. This test shall be repeated at least once every five years from the date of this valid compliance demonstration.

(c) Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.1.3 for thermal oxidizers using methods approved by the Commissioner.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.6 Thermal Oxidizer

(a) From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizers at or above the hourly average temperature of 621 degrees Celsius.

(b) The Permittee shall determine the temperature and fan amperage, or duct pressure, from the most recent valid stack test that demonstrates compliance with limits in Condition D.1.1, as approved by IDEM.

(c) From the date of the approved stack test results are available, the Permittee shall operate the thermal oxidizers at or above the hourly average temperature and fan amperage, or duct pressure as observed during the compliant stack test.

D.1.7 Parametric Monitoring

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizers for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizers are in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as indicated by the manufacturer or as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.8 Record Keeping Requirements

(a) To document compliance with Conditions D.1.1 and D.1.7, the Permittee shall maintain:

(1) Records of the VOC emitted based on: VOC delivered to the applicators x (1 - % destruction efficiency/100) + VOC in cleaning solvent.

(2) Continuous temperature records (on an hourly average basis) for the thermal oxidizer and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.

(3) Daily records of the duct pressure or fan amperage.

(b) All records shall be maintained in accordance with Section C- General Record Keeping Requirements of this permit.

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(e) One (1) Lepel Fabric wire enameling oven, installed before 1980, emission unit number 807, with a maximum capacity of 80 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent 0027.

(f) One (1) Lepel Fabric wire enameling oven, installed before 1980, emission unit number 806, with a maximum capacity of 80 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent 0028.

(g) One (1) Lepel Fabric wire enameling oven, installed before 1980, emission unit number 803, with a maximum capacity of 80 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent 0030.

(h) One (1) Lepel Fabric wire enameling oven, installed before 1980, emission unit number 802, with a maximum capacity of 80 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent 0031.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Volatile Organic Compound (VOC)

(a) Pursuant to 326 IAC 8-6 (Organic Solvent Emission Limitations), the VOC emitted from the four (4) Lepel Fabric wire enameling ovens, emission units 807, 806, 803 and 802 shall be reduced by at least eighty-five percent (85%).

(b) Any change or modification which may increase potential emissions from the four (4) Lepel Fabric wire enameling ovens shall require prior approval from the OAQ before such change may occur.

D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.2.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

Pursuant to 326 IAC 8-1-2(a), the Permittee shall operate the thermal oxidizers to achieve compliance with Condition D.2.1.

D.2.4 Thermal Oxidizer Operation

(a) Pursuant to the Construction Permit issued on October 17, 1997 (CP 003-8609-00013), the external thermal oxidizers shall operate at all times that the four (4) Lepel Fabric ovens are in operation. When operating, the external thermal oxidizers shall maintain a minimum operating temperature of 621 degrees Celsius or a temperature and fan amperage, or duct pressure, determined in the compliance testing to maintain a destruction efficiency of not less than ninety percent (90%) of volatile organic compound (VOC) captured.

(b) In order to ensure compliance with Condition D.2.1 and (a) above, the external thermal oxidizers must operate with a minimum destruction efficiency of ninety percent (90%)

and a minimum capture efficiency such that the overall control efficiency is at least eighty-five percent (85%).

D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.2.1, within fifty (50) months after issuance of this permit, the Permittee shall conduct performance tests to verify VOC control efficiency as per Condition D.2.3 for thermal oxidizer using methods approved by the Commissioner.

(b) One representative oven from the four (4) Lepel Quartz Fabric enamel ovens shall be tested. The oven tested shall be the oven in which the longest amount of time has elapsed since its previous test. This test shall be repeated at least once every five years from the date of this valid compliance demonstration.

(c) Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.2.3 for thermal oxidizers using methods approved by the Commissioner.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.6 Thermal Oxidizer

(a) From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizers at or above the hourly average temperature of 621 degrees Celsius.

(b) The Permittee shall determine the temperature and fan amperage, or duct pressure, from the most recent valid stack test that demonstrates compliance with limits in Condition D.2.3, as approved by IDEM.

(c) From the date of the approved stack test results are available, the Permittee shall operate the thermal oxidizers at or above the hourly average temperature and fan amperage, or duct pressure, as observed during the compliant stack test.

D.2.7 Parametric Monitoring

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizers for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizers are in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as indicated by the manufacturer or as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.8 Record Keeping Requirements

(a) To document compliance with Condition D.2.1 and D.2.7, the Permittee shall maintain:

(1) Records of the VOC emitted based on: VOC delivered to the applicators x (1 - % destruction efficiency/100) + VOC in cleaning solvent.

(2) Continuous temperature records (on an hourly average basis) for the thermal oxidizer and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.

(3) Daily records of the duct pressure or fan amperage.

(b) All records shall be maintained in accordance with Section C- General Record Keeping Requirements of this permit.

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(i) One (1) Quartz Fabric wire enameling oven, installed 1992, emission unit number 811, with a maximum capacity of 80 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0024.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Volatile Organic Compounds [326 IAC 8-2-8]

(a) Pursuant to 326 IAC 8-2-8 (Magnet Wire Coating Operations) and CP 003-8609-00013 issued on October 17, 1997, the owner or operator shall not allow the discharge into the atmosphere of VOC in excess of 1.7 pounds VOC per gallon of coating, excluding water, as delivered to the applicator.

(b) The equivalent pounds of VOC per gallon of coating solids (as applied) shall be limited to less than 2.21, when L is equal to 1.7 pounds of VOC per gallon of coating and D is equal to 7.36 pounds of VOC per gallon of coating.

(c) Pursuant to 326 IAC 8-1-2 (b), the enameling oven's VOC emission shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon coating solids, allowed in (a).

This equivalency was determined by the following equation:

$$E = L / (1 - (L/D))$$

Where

L= Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating
D= Density of VOC in coating in pounds per gallon of VOC
E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied

Actual solvent density shall be used to determine compliance of surface coating operation using the compliance methods in 326 IAC 8-1-2 (a).

(d) Pursuant to 326 IAC 8-1-2(c), the equivalent overall control efficiency of the thermal oxidizer shall be no less than 91.1% calculated by the following equation:

$$O = \frac{V - E}{V} \times 100$$

Where:

V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied.

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

O = Equivalent overall control efficiency of the capture system and control device as a percentage.

D.3.2 PSD Limit [326 IAC 2-2] [40 CFR 52.21]

Pursuant to CP 003-8609-00013 issued on October 17, 1997, the VOC emissions from the Quartz Fabric oven (emission unit 811)(Section D.3), the two (2) MAG VZ6 ovens (Section D.8), and the applicator cleaning area (Section D.10) shall be limited to less than 40 tons VOC per twelve (12) consecutive month period. An increase in total VOC emissions from these equipment above 40 tons per year shall require a PSD permit pursuant to 326 IAC 2-2 and 40 CFR 52.21 before such change may occur.

D.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.3.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

Pursuant to CP 003-8609-00013, issued October 17, 1997 and 326 IAC 8-1-2(a), the Permittee shall operate the external thermal oxidizer to achieve compliance with Conditions D.3.1 and D.3.2.

D.3.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.3.1 and D.3.2, within fifty (50) months after issuance of this permit, the Permittee shall conduct performance tests to verify VOC control efficiency as per Conditions D.3.1 for thermal oxidizers using methods approved by the Commissioner.

(b) Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.3.1 for thermal oxidizers using methods approved by the Commissioner.

D.3.6 VOC Emissions

Compliance with Condition D.3.2 shall be demonstrated within 30 days of the end of each month. This shall be based on the total volatile organic compound emitted for the previous month, and adding it to previous 11 months total VOC emitted so as to arrive at VOC emission for 12 consecutive months period. The VOC emissions for a month can be arrived at using the following equation for VOC usage:

VOC emitted = [(VOC input) x (100 - %control efficiency)] + [uncontrolled VOC input]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.7 Thermal Oxidizer

(a) From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature of 621 degrees Celsius.

(b) The Permittee shall determine the temperature and fan amperage, or duct pressure, from the most recent valid stack test that demonstrates compliance with limits in Conditions D.3.1 and D.3.2, as approved by IDEM.

(c) From the date of the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature and fan amperage, or the duct pressure, as observed during the compliant stack test.

D.3.8 Parametric Monitoring

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as indicated by the manufacturer or as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.9 Record Keeping Requirements

(a) To document compliance with Conditions D.3.1 and D.3.2, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limits and/or the VOC emission limits established in Conditions D.3.1 and D.3.2.

(1) The VOC content of each coating material and solvent used less water.

(2) The amount of coating material and solvent used on a monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) The monthly cleanup solvent usage.

(4) The total VOC usage for each month.

(5) The VOC emitted based on: VOC delivered to the applicators x (1 - % destruction efficiency/100) + VOC in cleaning solvent.

(b) To document compliance with Condition D.3.8, the Permittee shall maintain:

(1) Continuous temperature records (on an hourly average basis) for the thermal oxidizer and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.

(2) Daily records of the duct pressure or fan amperage.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.10 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.3.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(j) One (1) SICME ES enameling oven, installed March 1991, emission unit number 695, with a maximum capacity of 90 pounds of magnet wire per hour. Emissions shall be controlled by an internal thermal oxidizer (not integral) exhausted at Stack/Vent ID 0066.

(k) One (1) SICME ES wire enameling oven, installed March 1991, emission unit number 690, with a maximum capacity of 90 pounds of magnet wire per hour. Emissions shall be controlled by an internal thermal oxidizer (not integral) exhausted at Stack/Vent ID 0068.

(l) One (1) SICME ES wire enameling oven, installed March 1991, emission unit number 605, with a maximum capacity of 90 pounds of magnet wire per hour. Emissions shall be controlled by an internal thermal oxidizer (not integral) exhausted at Stack/Vent ID 0069.

(m) One (1) SICME ES wire enameling oven, installed March 1991, emission unit number 600, with a maximum capacity of 90 pounds of magnet wire per hour. Emissions shall be controlled by an internal thermal oxidizer (not integral) exhausted at Stack/Vent ID 0071.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 Volatile Organic Compounds [326 IAC 8-2-8]

(a) Pursuant to 326 IAC 8-2-8 (Magnet Wire Coating Operations), and CP 003-6199-00013 issued on February 11, 1997, the owner or operator shall not allow the discharge into the atmosphere of VOC in excess of 1.7 pounds VOC per gallon of coating, excluding water, as delivered to the applicator.

(b) The equivalent pounds of VOC per gallon of coating solids (as applied) shall be limited to less than 2.21, when L is equal to 1.7 pounds of VOC per gallon of coating and D is equal to 7.36 pounds of VOC per gallon of coating.

(c) Pursuant to 326 IAC 8-1-2 (b), the enameling ovens' VOC emission shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon coating solids, allowed in (a).

This equivalency was determined by the following equation:

$$E = L / (1 - (L/D))$$

Where

L= Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating
D= Density of VOC in coating in pounds per gallon of VOC
E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied

Actual solvent density shall be used to determine compliance of surface coating operation using the compliance methods in 326 IAC 8-1-2 (a).

(d) Pursuant to 326 IAC 8-1-2(c), the equivalent overall control efficiency of the thermal oxidizers shall be no less than 96.7% calculated by the following equation:

$$O = \frac{V - E}{V} \times 100$$

Where:

V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied.

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

O = Equivalent overall control efficiency of the capture system and control device as a percentage.

D.4.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.4.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

Pursuant to CP 003-8609-00013, issued October 17, 1997 and 326 IAC 8-1-2(a), the Permittee shall operate the internal thermal oxidizers to achieve compliance with Condition D.4.1.

D.4.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.4.1, within fifty (50) months after issuance of this permit, the Permittee shall conduct performance tests to verify VOC control efficiency as per Condition D.4.1 for thermal oxidizer using methods approved by the Commissioner.

(b) One representative oven from the four (4) SICME ES enamel ovens shall be tested. The oven tested shall be the oven in which the longest amount of time has elapsed since its previous test. This test shall be repeated at least once every five years from the date of this valid compliance demonstration.

(c) Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.4.1 for thermal oxidizers using methods approved by the Commissioner.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.4.5 Thermal Oxidizer

(a) From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizers at or above the hourly average temperature of 760 degrees Celsius.

(b) The Permittee shall determine the temperature and fan amperage, or duct pressure, from the most recent valid stack test that demonstrates compliance with limits in Condition D.4.1, as approved by IDEM.

(c) From the date of the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature and fan amperage, or duct pressure, as observed during the compliant stack test.

D.4.6 Parametric Monitoring

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as indicated by the manufacturer or as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.4.7 Record Keeping Requirements

(a) To document compliance with Condition D.4.1, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limits and/or the VOC emission limits established in Conditions D.4.1

(1) The VOC content of each coating material and solvent used less water.

(2) The amount of coating material and solvent used on a monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) The monthly cleanup solvent usage.

(4) The total VOC usage for each month.

(5) The VOC emitted (in tons per year) based on: VOC delivered x (1 - % destruction efficiency/100) + VOC in cleaning solvent.

(b) To document compliance with Condition D.4.6, the Permittee shall maintain:

(1) Continuous temperature records (on an hourly average basis) for the thermal oxidizer and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.

(2) Daily records of the duct pressure or fan amperage.

(c) All records shall be maintained in accordance with Section C- General Record Keeping Requirements, of this permit.

SECTION D.5 FACILITY CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(n) One (1) Square/Rectangular wire enameling oven, installed before 1980, emission unit number 610, with a maximum capacity of 66.67 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0091.

(o) One (1) Square/Rectangular wire enameling oven, installed before 1980, emission unit number 640, with a maximum capacity of 66.67 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0113.

(p) One (1) Square/Rectangular wire enameling oven, installed before 1980, emission unit number 620, with a maximum capacity of 66.67 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0118.

(q) One (1) Square/Rectangular wire enameling oven, installed before 1980, emission unit number 670, with a maximum capacity of 66.67 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0122.

(r) One (1) Square/Rectangular wire enameling oven, installed before 1980, emission unit number 680, with a maximum capacity of 66.67 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0133.

(s) One (1) Square/Rectangular wire enameling oven, installed before 1980, emission unit number 660, with a maximum capacity of 66.67 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0140.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.5.1 Volatile Organic Compound (VOC)

(a) Pursuant to 326 IAC 8-6 (Organic Solvent Emission Limitations), the VOC emitted from the six (6) Square/Rectangular wire enameling ovens, emission units 610, 640, 620 670, 680 and 660 shall be reduced by at least eighty-five percent (85%).

(b) Any change or modification which may increase potential emissions from the six (6) Square/Rectangular wire enameling ovens shall require prior approval from the OAQ before such change may occur.

D.5.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.5.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

Pursuant to 326 IAC 8-1-2(a), the Permittee shall operate the thermal oxidizers to achieve compliance with Condition D.5.1.

D.5.4 Thermal Oxidizer Operation

To ensure compliance with Condition D.5.1, the external thermal oxidizers shall operate at all times that the six (6) square/rectangular ovens are in operation. When operating, the external thermal oxidizers shall maintain a minimum operating temperature of 593 degrees Celsius or a temperature and fan amperage, or duct pressure, determined in the compliance testing to maintain a volatile organic compound (VOC) overall control efficiency of not less than eighty-five percent (85%).

D.5.5 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.5.1, within sixty (60) days after issuance of this permit, the Permittee shall conduct performance tests to verify VOC control efficiency as per Condition D.5.3 for thermal oxidizer using methods approved by the Commissioner.

(b) One representative oven from the six (6) Square/Rectanglar enamel ovens shall be tested. The oven tested shall be the oven in which the longest amount of time has elapsed since its previous test. This test shall be repeated at least once every five years from the date of this valid compliance demonstration.

(c) Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.5.3 for thermal oxidizers using methods approved by the Commissioner.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.5.6 Thermal Oxidizer

(a) From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature of 593 degrees Celsius.

(b) The Permittee shall determine the temperature and fan amperage, or duct pressure, from the most recent valid stack test that demonstrates compliance with limits in Condition D.5.1 as approved by IDEM.

(c) From the date of the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature and fan amperage, or duct pressure, as observed during the compliant stack test.

D.5.7 Parametric Monitoring

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizers for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizers are in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as indicated by the manufacturer or as

established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.5.8 Record Keeping Requirements

(a) To document compliance with Conditions D.5.1 and D.5.7, the Permittee shall maintain:

(1) Records of the VOC emitted based on: VOC delivered to the applicators x (1 - % destruction efficiency/100) + VOC in cleaning solvent.

(2) Continuous temperature records (on an hourly average basis) for the thermal oxidizer and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.

(3) Daily records of the duct pressure or fan amperage.

(b) All records shall be maintained in accordance with Section C- General Record Keeping Requirements of this permit.

SECTION D.6 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(t) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 351-352, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0172.

(u) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 353-354, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0173.

(v) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 355-356, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0174.

(w) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 367-368, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0175.

(x) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 365-366, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0176.

(y) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 363-364, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0177.

(z) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 373-374, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0196.

(aa) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 371-372, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0197.

(bb) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 369-370, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0198.

(cc) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 357-358, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0199.

(dd) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 359-360, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0200.

(ee) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 361-362, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0201.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.6.1 Volatile Organic Compound (VOC)

(a) Pursuant to 326 IAC 8-6 (Organic Solvent Emission Limitations), the VOC emitted from the twelve (12) MOCO wire enameling ovens, emission units 351-352, 353-354, 355-356, 367-368, 365-366, 363-364, 373-374, 371-372, 369-370, 357-358, 359-360, and 361-362 shall be reduced by at least eighty-five percent (85%).

(b) Any change or modification which may increase potential emissions from the twelve (12) MOCO wire enameling ovens shall require prior approval from the OAQ before such change may occur.

D.6.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.6.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

Pursuant to 326 IAC 8-1-2(a), the Permittee shall operate the thermal oxidizers to achieve compliance with Condition D.6.1.

D.6.4 Thermal Oxidizer

In order to satisfy the requirements of 326 IAC 8-6 and Condition D.6.1, the external thermal oxidizers must operate such that the overall control efficiency is at least eighty-five percent (85%).

D.6.5 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.6.1, within sixty (60) days after issuance of this permit, the Permittee shall conduct performance tests to verify VOC control efficiency as per Condition D.6.3 for thermal oxidizer using methods approved by the Commissioner.

(b) One representative oven from the twelve (12) MOCO enamel ovens shall be tested. The oven tested shall be the oven in which the longest amount of time has elapsed since its previous test. This test shall be repeated at least once every five years from the date of this valid compliance demonstration.

(c) Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.6.3 for thermal oxidizers using methods approved by the Commissioner.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.6.6 Thermal Oxidizer

(a) From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizers at or above the hourly average temperature of 593 degrees Celsius.

(b) The Permittee shall determine the temperature and fan amperage, or duct pressure, from the most recent valid stack test that demonstrates compliance with limits in Condition D.6.1, as approved by IDEM.

(c) From the date of the approved stack test results are available, the Permittee shall operate the thermal oxidizers at or above the hourly average temperature and fan amperage, or duct pressure, as observed during the compliant stack test.

D.6.7 Parametric Monitoring

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizers for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizers are in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as indicated by the manufacturer or as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.6.8 Record Keeping Requirements

(a) To document compliance with Conditions D.6.1 and D.6.7, the Permittee shall maintain:

(1) Records of the VOC emitted based on: VOC delivered to the applicators x (1 - % destruction efficiency/100) + VOC in cleaning solvent.

(2) Continuous temperature records (on an hourly average basis) for the thermal oxidizer and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.

(3) Daily records of the duct pressure or fan amperage.

(b) All records shall be maintained in accordance with Section C- General Record Keeping Requirements of this permit.

SECTION D.7 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(ff) One (1) MAG VEL 6 wire enameling pilot oven with an integral internal catalytic oxidizer, installed November 11, 1993, and a maximum capacity of 133.33 pounds of magnet wire per hour. Emissions shall be exhausted at Stack/Vent 1041-1044.

(gg) One (1) MAG VEL 8 wire enameling pilot oven with an integral internal catalytic oxidizer, installed November 11, 1993, and a maximum capacity of 133.33 pounds of magnet wire per hour. Emissions shall be exhausted at Stack/Vent 1048-1051.

(hh) One (1) MAG HZ 4 wire enameling pilot oven with an integral internal catalytic oxidizer, installed November 11, 1993, and a maximum capacity of 133.33 pounds of magnet wire per hour. Emissions shall be exhausted at Stack/Vent 1053.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.7.1 Volatile Organic Compounds [326 IAC 8-2-8]

(a) Pursuant to 326 IAC 8-2-8 (Magnet Wire Coating Operations) and CP 003-3268-00013 issued on February 2, 1994, the owner or operator shall not allow the discharge into the atmosphere of VOC in excess of 1.7 pounds VOC per gallon of coating, excluding water, as delivered to the applicator.

(b) The equivalent pounds of VOC per gallon of coating solids (as applied) shall be limited to less than 2.21, when L is equal to 1.7 pounds of VOC per gallon of coating and D is equal to 7.36 pounds of VOC per gallon of coating.

(c) Pursuant to 326 IAC 8-1-2 (b), the enameling oven's VOC emission shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon coating solids, allowed in (a).

This equivalency was determined by the following equation:

$$E = L / (1 - (L/D))$$

Where

L= Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating
D= Density of VOC in coating in pounds per gallon of VOC
E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied

Actual solvent density shall be used to determine compliance of surface coating operation using the compliance methods in 326 IAC 8-1-2 (a).

(d) Pursuant to 326 IAC 8-1-2(c), the equivalent overall control efficiency of the thermal oxidizer shall be no less than 94.8% calculated by the following equation:

$$O = \frac{V - E}{V} \times 100$$

Where:

V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied.

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

O = Equivalent overall control efficiency of the capture system and control device as a percentage.

D.7.2 Volatile Organic Compounds

Pursuant to the Registration issued on February 2, 1994, (CP-003-3268-0013), the emissions of VOC from the three (3) ovens are limited to a total of 25 tons per year or less.

D.7.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.7.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

Pursuant to CP 003-3268-00013, issued on February 2, 1994 and 326 IAC 8-1-2(a), the Permittee shall operate the internal catalytic oxidizers to achieve compliance with Conditions D.7.1 and D.7.2.

D.7.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.7.1, within twenty-four (24) months after issuance of this permit, the Permittee shall conduct performance tests to verify VOC control efficiency as per Condition D.7.1 for catalytic oxidizers using methods approved by the Commissioner. Testing shall also be conducted every twenty-four (24) months after this first test.

(b) One representative catalytic oxidizer from the three (3) wire enameling pilot ovens shall be tested. The catalytic oxidizer tested shall be the oven with the oldest catalyst life that has not been tested since the issuance of this permit. Oldest catalyst refers to the longest serving catalyst since last activation.

(c) Within twenty-four (24) months of issuance of this permit and every twenty-four (24) months thereafter, the Permittee shall remove the catalyst from each oven and have the catalyst vendor conduct a catalyst activity analysis. Catalysts with percent activity less than the catalyst activity of the oldest catalyst must be replaced or a stack test must be conducted to show that a 94.8% overall control efficiency is being achieved.

(d) Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.7.4 for catalytic oxidizers using methods approved by the Commissioner.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.7.6 Catalytic Oxidizer

(a) From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the catalytic oxidizer at or above the hourly average temperature of 580 degrees Celsius.

(b) The Permittee shall determine the temperature from the most recent valid stack test that demonstrates compliance with limits in Conditions D.7.1 and D.7.2, as approved by IDEM.

(c) From the date of the approved stack test results are available, the Permittee shall operate the catalytic oxidizers at or above the hourly average temperature as observed during the compliant stack test.

D.7.7 Parametric Monitoring

A continuous monitoring system shall be calibrated, maintained, and operated on the catalytic oxidizers for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

D.7.8 Catalyst Replacement

The catalysts shall be replaced a minimum of every twenty-four (24) months provided that the catalytic oxidizers are achieving the required overall control efficiency. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.7.9 Record Keeping Requirements

(a) To document compliance with Conditions D.7.1 and D.7.2, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limits and/or the VOC emission limits established in Conditions D.7.1 and D.7.2.

(1) The VOC content of each coating material and solvent used less water.

(2) The amount of coating material and solvent used on a monthly basis.

(a) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(b) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) The monthly cleanup solvent usage.

(4) The total VOC usage for each month.

(5) The VOC emitted based on: VOC delivered to the applicators x (1 - % destruction efficiency/100) + VOC in cleaning solvent.

(b) To document compliance with Condition D.7.7, the Permittee shall maintain records of continuous temperature records (on an hourly average basis) for the catalytic oxidizer

and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.

(c) To document compliance with Condition D.7.8, the Permittee shall maintain records of the catalyst replacement.

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.8 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(ii) One (1) MAG VZ 6 wire enameling oven, known as No.1, with an integral internal catalytic oxidizer, emission unit number 301-309, installed late 1998 or early 1999, with a maximum capacity of 1,158 pounds of magnet wire per hour. Emissions shall be exhausted at Stack/Vent 0383-0388.

(jj) One (1) MAG VZ 6 wire enameling oven, known as No. 2 with an integral internal catalytic oxidizer, emission unit number 310-318, installed late 1998 or early 1999, with a maximum capacity of 1,158 pounds of magnet wire per hour. Emissions shall be exhausted at Stack/Vent 0389-0394.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.8.1 Volatile Organic Compounds [326 IAC 8-2-8]

(a) Pursuant to 326 IAC 8-2-8 (Magnet Wire Coating Operations) and CP 003-8609-00013 issued on October 17, 1997, the owner or operator shall not allow the discharge into the atmosphere of VOC in excess of 1.7 pounds VOC per gallon of coating, excluding water, as delivered to the applicator.

(b) The equivalent pounds of VOC per gallon of coating solids (as applied) shall be limited to less than 2.21, when L is equal to 1.7 pounds of VOC per gallon of coating and D is equal to 7.36 pounds of VOC per gallon of coating.

(c) Pursuant to 326 IAC 8-1-2 (b), the enameling oven's VOC emission shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon coating solids, allowed in (a).

This equivalency was determined by the following equation:

$$E = L / (1 - (L/D))$$

Where

L= Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating
D= Density of VOC in coating in pounds per gallon of VOC
E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied

Actual solvent density shall be used to determine compliance of surface coating operation using the compliance methods in 326 IAC 8-1-2 (a).

(d) Pursuant to 326 IAC 8-1-2(c), the equivalent overall control efficiency of the thermal oxidizer shall be no less than 92.3% calculated by the following equation:

$$O = \frac{V - E}{V} \times 100$$

Where:

V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied.

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

O = Equivalent overall control efficiency of the capture system and control device as a percentage.

D.8.2 PSD Limit [326 IAC 2-2] [40 CFR 52.21]

Pursuant to CP 003-8609-00013 issued on October 17, 1997, the VOC emissions from the Quartz Fabric oven (emission unit 811)(Section D.3), the two (2) MAG VZ6 ovens (Section D.8), and the applicator cleaning area (Section D.10) shall be limited to less than 40 tons per twelve (12) consecutive months of VOC. An increase in total VOC emissions from these equipment above 40 tons per year shall require a PSD permit pursuant to 326 IAC 2-2 and 40 CFR 52.21 before such change may occur.

D.8.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.8.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

Pursuant to CP 003-8609-00013, issued October 17, 1997 and 326 IAC 8-1-2(a), the Permittee shall operate the internal catalytic oxidizers to achieve compliance with Conditions D.8.1 and D.8.2.

D.8.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.8.1 and D.8.2, within twenty-four (24) months after issuance of this permit, the Permittee shall conduct performance tests to verify VOC control efficiency as per Condition D.8.1 for catalytic oxidizers using methods approved by the Commissioner. Testing shall also be conducted every twenty-four (24) months after this first test.

(b) One representative catalytic oxidizer from the two (2) wire enameling ovens shall be tested. The catalytic oxidizer tested shall be the oven with the oldest catalyst life that has not been tested since the issuance of this permit. Oldest catalyst refers to the longest serving catalyst since last activation.

(c) Within twenty-four (24) months of issuance of this permit and every twenty-four (24) months thereafter, the Permittee shall remove the catalyst from each oven and have the catalyst vendor conduct a catalyst activity analysis. Catalysts with percent activity less than the catalyst activity of the oldest catalyst must be replaced or a stack test must be conducted to show that a 92.3% overall control efficiency is being achieved.

(d) Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.8.1 for catalytic oxidizers using methods approved by the Commissioner.

D.8.6 VOC Emissions

Compliance with Condition D.8.2 shall be demonstrated within 30 days of the end of each month. This shall be based on the total volatile organic compound emitted for the previous month, and adding it to previous 11 months total VOC emitted so as to arrive at VOC emission

for 12 consecutive months period. The VOC emissions for a month can be arrived at using the following equation for VOC usage:

VOC emitted = [(VOC input) x (100 - %control efficiency)] + [uncontrolled VOC input]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.8.7 Catalytic Oxidizer

(a) From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the catalytic oxidizers at or above the hourly average temperature of 677 degrees Celsius.

(b) The Permittee shall determine the temperature from the most recent valid stack test that demonstrates compliance with limits in Conditions D.8.1 and D.8.2, as approved by IDEM.

(c) From the date of the approved stack test results are available, the Permittee shall operate the catalytic oxidizers at or above the hourly average temperature as observed during the compliant stack test.

D.8.8 Parametric Monitoring

A continuous monitoring system shall be calibrated, maintained, and operated on the catalytic oxidizers for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

D.8.9 Catalyst Replacement

The catalysts shall be replaced a minimum of every twenty-four (24) months provided that the catalytic oxidizer is achieving the required overall control efficiency. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.8.10 Record Keeping Requirements

(a) To document compliance with Conditions D.8.1 and D.8.2, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limits and/or the VOC emission limits established in Conditions D.8.1 and D.8.2.

(1) The VOC content of each coating material and solvent used less water.

(2) The amount of coating material and solvent used on a monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) The monthly cleanup solvent usage.

(4) The total VOC usage for each month.

(5) The VOC emitted based on: VOC delivered to the applicators x (1 - % destruction efficiency/100) + VOC in cleaning solvent.

(b) To document compliance with Condition D.8.8, the Permittee shall maintain continuous temperature records (on an hourly average basis) for the thermal oxidizer and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.

(c) To document compliance with Condition D.8.9, the Permittee shall maintain records of the catalyst replacement.

(d) All records shall be maintained in accordance with Section C- General Record Keeping Requirements, of this permit.

D.8.11 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.8.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.9 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(kk) One (1) MAG-VZ/5 oven with a maximum capacity of 1,146 pounds magnet wire per hour, consisting of three (3) nine (9) line machines, installed in 2000, equipped with two (2) integral catalytic oxidizers for VOC control, exhausted through stacks 398, 399, and 400, as well as cooling stacks 401, 402 and 403.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.9.1 Volatile Organic Compounds [326 IAC 8-2-8] [326 IAC 2-2] [40 CFR 52.21]

(a) Pursuant to 326 IAC 8-2-8 (Magnet Wire Coating Operations), the owner or operator shall not allow the discharge into the atmosphere of VOC in excess of 1.7 pounds VOC per gallon of coating, excluding water, as delivered to the applicator.

(b) The equivalent pounds of VOC per gallon of coating solids (as applied) shall be limited to less than 2.21, when L is equal to 1.7 pounds of VOC per gallon of coating and D is equal to 7.36 pounds of VOC per gallon of coating.

(c) Pursuant to 326 IAC 8-1-2 (b), the enameling oven's VOC emission shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon coating solids, allowed in (a).

This equivalency was determined by the following equation:

$$E = L / (1 - (L/D))$$

Where

L= Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating
D= Density of VOC in coating in pounds per gallon of VOC
E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied

Actual solvent density shall be used to determine compliance of surface coating operation using the compliance methods in 326 IAC 8-1-2 (a).

(d) Pursuant to 326 IAC 8-1-2(c), the equivalent overall control efficiency of the thermal oxidizer shall be no less than 92.3% calculated by the following equation:

$$O = \frac{V - E}{V} \times 100$$

Where:

V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied.

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

O = Equivalent overall control efficiency of the capture system and control device as a percentage.

(e) The potential to emit of VOC is less than the significant level under prevention of significant deterioration (PSD) of 40 tons per year. Therefore, a PSD review was not required when this oven was originally permitted. However, any change or modification the would increase VOC emissions above 40 tons per year shall require a PSD permit pursuant to 326 IAC 2-2 and 40 CFR 52.21 before such change can occur.

D.9.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.9.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

Pursuant to 326 IAC 8-1-2(a), the Permittee shall operate the catalytic oxidizers to achieve compliance with Condition D.9.1.

D.9.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.9.1, within twenty-four (24) months after issuance of this permit, the Permittee shall conduct performance tests to verify VOC control efficiency as per Condition D.9.1 for catalytic oxidizers using methods approved by the Commissioner. Testing shall also be conducted every twenty-four (24) months after this first test.

(b) One representative catalytic oxidizer shall be tested. The oven tested shall be the oven with the oldest catalyst life that has not been tested since the issuance of this permit. Oldest catalyst refers to the longest serving catalyst since last activation.

(c) Within twenty-four (24) months of issuance of this permit and every twenty-four (24) months thereafter, the Permittee shall remove the catalyst from each oven and have the catalyst vendor conduct a catalyst activity analysis. Catalysts with percent activity less than the catalyst activity of the oldest catalyst must be replaced or a stack test must be conducted to show that a 92.3% overall control efficiency is being achieved.

(d) Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.9.1 for catalytic oxidizers using methods approved by the Commissioner.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.9.5 Catalytic Oxidizer

(a) From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the catalytic oxidizer at or above the hourly average temperature of 500 degrees Celsius.

(b) The Permittee shall determine the temperature from the most recent valid stack test that demonstrates compliance with limits in Condition D.9.1, as approved by IDEM.

(c) From the date of the approved stack test results are available, the Permittee shall operate the catalytic oxidizer at or above the hourly average temperature as observed during the compliant stack test.

D.9.6 Parametric Monitoring

A continuous monitoring system shall be calibrated, maintained, and operated on the catalytic oxidizer for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

D.9.7 Catalyst Replacement

The catalysts shall be replaced a minimum of every twenty-four (24) months provided that the catalytic oxidizer is achieving the required overall control efficiency. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.9.8 Record Keeping Requirements

(a) To document compliance with Condition D.9.1, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limits and/or the VOC emission limits established in Condition D.9.1.

(1) The VOC content of each coating material and solvent used less water.

(2) The amount of coating material and solvent used on a monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) The monthly cleanup solvent usage; and

(4) The total VOC usage for each month.

(5) The VOC emitted (in tons per year) based on: VOC delivered x (1 - % destruction efficiency/100) + VOC in cleaning solvent.

(b) To document compliance with Condition D.9.6, the Permittee shall maintain records of the continuous temperature records (on an hourly average basis) for the catalytic oxidizer and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.

(c) To document compliance with Condition D.9.7, the Permittee shall maintain records of the catalyst replacement.

(d) All records shall be maintained in accordance with Section C- General Record Keeping Requirements, of this permit.

SECTION D.10 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(ll) One (1) applicator cleaning area, installed January 1991 consisting of tanks 1 through 7, exhausted through stacks 0299, 0300 and 0301, capacity: 150 gallons each for tanks 1and 2, 650 gallons for tank 3, 500 gallons each for tanks 4 and 5, 400 gallons for tank 6 and 500 gallons for tank 7.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.10.1 PSD Limit [326 IAC 2-2] [40 CFR 52.21]

Pursuant to CP 003-8609-00013 issued on October 17, 1997, the VOC emissions from the Quartz Fabric oven (emission unit 811)(Section D.3), the two (2) MAG VZ6 ovens (Section D.8), and the applicator cleaning area (Section D.10) shall be limited to less than 40 tons per twelve (12) consecutive months of VOC. An increase in total VOC emissions from these equipment above 40 tons per year shall require a PSD permit pursuant to 326 IAC 2-2 and 40 CFR 52.21 before such change may occur.

D.10.2 Volatile Organic Compounds (VOC)

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations) for cold cleaner operations constructed after January 1980, the owner or operator shall:

(a) Equip the cleaner with a cover;

(b) Equip the cleaner with a facility for draining cleaned parts;

(c) Close the degreaser cover whenever parts are not being handled in the cleaner;

(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(e) Provide a permanent, conspicuous label summarizing the operation requirements;

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.10.3 Volatile Organic Compounds (VOC)

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility construction of which commenced after July 1, 1990 shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius ($38^{O}C$) (one hundred degrees Fahrenheit ($100^{O}F$));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^{O}C) (one hundred degrees Fahrenheit (100^{O}F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^{O}C) (one hundred degrees Fahrenheit (100^{O}F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9^{O}C) (one hundred twenty degrees Fahrenheit (120^{O}F)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent is used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:

(1) Close the cover whenever articles are not being handled in the degreaser.

(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.10.4 Record Keeping Requirements

(a) To document compliance with Condition D.10.1, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Conditions D.10.1.

(1) The VOC content of each coating material and solvent used less water.

(2) The amount of coating material and solvent used on a monthly basis.

(a) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(b) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) The monthly cleanup solvent usage; and

(4) The total VOC usage for each month;

(5) The weight of VOCs emitted for each compliance period.

(b) All records shall be maintained in accordance with Section C- General Record Keeping Requirements, of this permit.

D.10.5 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.10.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.11 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour [326 IAC 6-2-4]:

(1) One (1) 7.54 MMBtu natural gas fired boiler, designated as Boiler 1, installed in 1971, exhausting at Stack/Vent 0218.

(2) One (1) 7.54 MMBtu natural gas fired boiler, designated as Boiler 2, installed in 1971, exhausting at Stack/Vent 0222.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.11.1 Particulate Matter (PM) [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3(d) (Particulate Matter Emission Limitations for Sources of Indirect Heating) the PM emissions from each boiler shall be limited to 0.80 pounds per MMBtu heat input.

SECTION D.12 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(b) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.12.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate for each of the manufacturing activities shall not exceed allowable PM emission rate based on the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Phelps Dodge Magnet Wire Company
Source Address: 4300 New Haven Avenue, Fort Wayne, In 46803
Mailing Address: 2131 South Coliseum Boulevard, Fort Wayne, In 46803
Part 70 Permit No.: T003-6925-00013

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

9 Annual Compliance Certification Letter

9 Test Result (specify) _____

9 Report (specify) _____

9 Notification (specify) _____

9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

COMPLIANCE BRANCH
P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Phelps Dodge Magnet Wire Company
Source Address: 4300 New Haven Avenue, Fort Wayne, In 46803
Mailing Address: 2131 South Coliseum Boulevard, Fort Wayne, In 46803
Part 70 Permit No.: T003-6925-00013

This form consists of 2 pages **Page 1 of 2**

9 This is an emergency as defined in 326 IAC 2-7-1(12)

- C The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
- C The Permittee must submit notice in writing or by facsimile within two (**2**) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Phelps Dodge Magnet Wire Company
Source Address: 4300 New Haven Avenue, Fort Wayne, Indiana 46803
Mailing Address: 2131 S. Coliseum Blvd., Fort Wayne, Indiana 46803
Part 70 Permit No.: T003-6925-00013
Facility: Quartz Fabric oven 811, the two (2) MAG VZ6 ovens, and the applicator cleaning area
Parameter: VOC emissions
Limit: Less than 40 tons per 12 consecutive months

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Phelps Dodge Magnet Wire Company
Source Address: 4300 New Haven Avenue, Fort Wayne, In 46803
Mailing Address: 2131 South Coliseum Boulevard, Fort Wayne, In 46803
Part 70 Permit No.: T003-6925-00013

Months: _____ to _____ Year: _____

This report is an affirmation that the source has met all the requirements stated in this permit. This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Page 2 of 2

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed By: ______________________________

Title/Position: ______________________________

Date: ______________________________

Phone: ______________________________

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the
Technical Support Document (TSD) for a Title V Operating Permit

Source Background and Description

Source Name:	Phelps Dodge Magnet Wire Company
Source Location:	4300 New Haven Avenue, Ft. Wayne, Indiana 46803
County:	Allen
SIC Code:	3357
Operation Permit No.:	T003-6925-00013
Permit Reviewer:	ERG/BS

On February 26, 2001, the Office of Air Quality (OAQ) had a notice published in the Fort Wayne Journal Gazette, Fort Wayne, Indiana, stating that Phelps Dodge Magnet Wire Company had applied for a Title V Operating Permit to operate a stationary magnet wire coating process. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On March 8, 2002, Phelps Dodge Magnet Wire Company submitted comments on the proposed Part 70 permit. The following is a summary of the comments and responses to those comments. The Table Of Contents has been modified, if applicable, to reflect these changes.

Comment 1:

Conditions D.1.1, D.2.1, and D.5.1 require that VOC emissions be reduced by at least 85%, which would occur before the application of any control equipment of process. Conditions D.1.3, D.2.3, and D.5.3 require the respective facilities to maintain an overall VOC efficiency of not less than 90%. This appears to be an inconsistency in the required control efficiency. Construction permit CP 003-8609 requires the overall efficiency to be 85% and the destruction efficiency to be 90% for the thermal oxidizers. Therefore, the overall control efficiencies of the respective thermal oxidizers should be 85% and the destruction efficiencies should be at least 90%.

Response to Comment 1:

The following changes have been made to the permit to clarify that the thermal oxidizers must operate with a ninety percent (90%) destruction efficiency resulting in at least an eighty-five percent (85%) overall efficiency. (Other changes are also shown that are a result of comments discussed elsewhere in this document.)

D.1.~~3~~**4** Thermal Oxidizer Operation

(a) Pursuant to the Construction Permit issued on October 17, 1997 (CP 003-8609-00013), the **external** thermal oxidizers shall operate at all times that the ten (10) Quartz Fabric ovens are in operation. When operating, the **external** thermal oxidizers shall maintain a minimum operating temperature of ~~1,150 degrees Fahrenheit~~ **621 degrees Celsius** or a temperature **and** fan amperage**, or** ~~and~~ duct **pressure,** ~~velocity~~ determined in the

compliance testing to maintain ~~an overall~~ **a destruction** efficiency of not less than **ninety percent (**90**%)** ~~percent~~ of volatile organic compound (VOC) **captured**.

(b) ~~The 90% efficiency is also necessary to ensure compliance with 326 IAC 8-6.~~ **In order to satisfy the requirements of 326 IAC 8-6 and Condition D.1.1, the thermal oxidizers must operate with a minimum destruction efficiency of ninety percent (90%) and a minimum capture efficiency such that the overall control efficiency is at least eighty-five percent (85%).**

D.2.~~3~~**4** Thermal Oxidizer Operation

(a) Pursuant to the Construction Permit issued on October 17, 1997 (CP 003-8609-00013), the **external** thermal oxidizers shall operate at all times that the four (4) Lepel Fabric ovens are in operation. When operating, the **external** thermal oxidizers shall maintain a minimum operating temperature of ~~1,150 degrees Fahrenheit~~ **621 degrees Celsius** or a temperature **and** fan amperage**, or** ~~and~~ duct **pressure,** ~~velocity~~ determined in the compliance testing to maintain ~~an overall~~ **a volatile organic compound (VOC) destruction** efficiency of not less than **ninety percent (**90**%)** of the volatile organic compound (VOC) **captured.**

(b) ~~The 90% efficiency is also necessary to ensure compliance with 326 IAC 8-6.~~ **In order to satisfy the requirements of 326 IAC 8-6 and (a) above, the thermal oxidizers must operate with a minimum destruction efficiency of ninety percent (90%) and a minimum capture efficiency such that the overall control efficiency is at least eighty-five percent (85%).**

D.5.~~3~~**4** ~~Volatile Organic Compound (VOC)~~ **Thermal Oxidizer Operation**

~~(a)~~ To ensure compliance with Condition D.5.1, the external thermal oxidizers ~~associated with these facilities shall operate with an overall efficiency of not less than 85% at all times when the facilities are in operation.~~ **shall operate at all times that the six (6) square/rectangular ovens are in operation. When operating, the thermal oxidizers shall maintain a minimum operating temperature of 593 degrees Celsius or a temperature, fan amperage and duct velocity determined in the compliance testing to maintain a volatile organic compound (VOC) overall control efficiency of not less than eighty-five percent (85%).**

~~(b) The external thermal oxidizers shall be operated at or above 1100EF or a temperature determined during compliance tests to maintain a minimum 85% overall efficiency.~~

Comment 2:

Several conditions in section D.1 through D.9 require Phelps Dodge to comply with the minimal oxidizer temperatures based on eight-hour averages. Hourly temperature averages need to be reviewed if the eight-hour average is within 5 degrees of the minimum temperature of 1150°F. If an hourly average reading is less than 1150°F, it is considered non-compliance. 326 IAC 8-1-12(2)(c)(6) states that, for thermal incinerators, records of three hour periods in which the temperature was more than fifty (50) degrees below the minimum temperature would be used to determine compliance. The respective monitoring conditions should be changed to match 326 IAC 8-1-12(2)(c)(6). Phelps Dodge would prefer to monitor the temperature based on three-hour averages and have a fifty degree Fahrenheit (50°F) margin before a deviation is established.

Comment 3:

Several conditions in section D.1 through D.9 require Phelps Dodge to maintain records of the computer-collected data. We request to have a back-up method included in the permit to provide a method in case the computer is not functional. We suggest manually recording the temperature information daily for each control device.

Response to Comments 2 and 3:

The language has been revised to simply require the temperature to be recorded and to compare the hourly temperature averages to determine compliance. Language has also been added to allow for manual recording while the continuous monitoring system is not in operation. Assuming that the source is referring to 326 IAC 8-1-12(c)(6) when citing 326 IAC 8-1-12(2)(c)(6), this provision applies to certain graphic arts operations and does not apply to this source. (Other changes are also shown that are a result of comments discussed elsewhere in this document.)

~~D.1.5 Monitoring~~

~~(a) Compliance with the 1,150EF minimum temperature will be monitored by computer collected data generated continuously.~~

~~(b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour average temperature records will be made available within five business days from request.~~

~~(c) The temperatures will be reported based on an eight-hour average.~~

~~(d) The oxidizer shall operate with a five (5) degree buffer such that if the eight hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour average temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.~~

~~(e) If a one-hour average temperature is less than the established minimum temperature, this will be considered noncompliance.~~

D.1.7 Parametric Monitoring

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. When for any one reading, the duct pressure or amperage is outside the normal range as indicated by the manufacturer or as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

~~D.2.5 Monitoring~~

~~(a) Compliance with the 1,150EF minimum temperature will be monitored by computer collected data generated continuously.~~

~~(b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour average temperature records will be made available within five business days from request.~~

~~(c) The temperatures will be reported based on an eight-hour average.~~

~~(d) The oxidizer shall operate with a five (5) degree buffer such that if the eight hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour average temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.~~

~~(e) If a one-hour average temperature is less than the established minimum temperature, this will be considered noncompliance.~~

D.2.7 Parametric Monitoring

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizers for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizers are in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as indicated by the manufacturer or as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

~~D.3.8 Monitoring~~

~~(a) Compliance with the 1150EF minimum temperature will be monitored by computer collected data generated continuously.~~

~~(b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour average temperature records will be made available within five business days from request.~~

~~(c) The temperatures will be reported based on an eight-hour average.~~

~~(d) The oxidizer shall operate with a five (5) degree buffer such that if the eight hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour average temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.~~

~~(e) If a one-hour average temperature is less than the established minimum temperature, this will be considered noncompliance.~~

D.3.8 Parametric Monitoring

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as indicated by the manufacturer or

as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

~~D.4.6 Monitoring~~

~~(a) Compliance with the 1,400EF minimum temperature will be monitored by computer collected data generated continuously.~~

~~(b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour average temperature records will be made available within five business days from request.~~

~~(c) The temperatures will be reported based on an eight-hour average.~~

~~(d) The oxidizer shall operate with a five (5) degree buffer such that if the eight hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour average temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.~~

~~(e) If one-hour average temperature is less than the established minimum temperature, this will be considered noncompliance.~~

D.4.6 Parametric Monitoring

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as indicated by the manufacturer or as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

~~D.5.5 Monitoring~~

~~(a) Compliance with the 1100EF minimum temperature will be monitored by computer collected data generated continuously.~~

~~(b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour average temperature records will be made available within five business days from request.~~

~~(c) The temperature will be reported based on an eight-hour average.~~

~~(d) The oxidizer shall operate with a five (5) degree buffer such that if the eight hour~~

~~average temperature falls within five (5) degree of the minimum required temperature, corrective action shall be performed and one-hour average temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.~~

~~(e) If a one-hour average temperature is less than the established minimum temperature, this will be considered noncompliance.~~

D.5.7 Parametric Monitoring

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizers for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizers are in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as indicated by the manufacturer or as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

~~D.6.5 Monitoring~~

~~(a) Compliance with the 1100EF minimum temperature will be monitored by computer collected data generated continuously.~~

~~(b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour average temperature records will be made available within five business days from request.~~

~~(c) The temperature will be reported based on an eight-hour average.~~

~~(d) The oxidizer shall operate with a five (5) degree buffer such that if the eight hour average temperature falls within five (5) degree of the minimum required temperature, corrective action shall be performed and one-hour average temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.~~

~~(e) If a one-hour average temperature is less than the established minimum temperature, this will be considered noncompliance.~~

D.6.7 Parametric Monitoring

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizers for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizers are in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as indicated by the manufacturer or as established in most recent compliant stack test, the Permittee

shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

~~D.7.7 Monitoring~~

~~(a) Compliance with the 1,076EF minimum temperature will be monitored by computer collected data generated continuously.~~

~~(b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour average temperature records will be made available within five business days from request.~~

~~(c) The temperatures will be reported based on an eight-hour average.~~

~~(d) The oxidizers shall operate with a five (5) degree buffer such that if the eight hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour average temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.~~

~~(e) If a one-hour average temperature is less than the established minimum temperature, this will be considered noncompliance.~~

D.7.7 Parametric Monitoring

A continuous monitoring system shall be calibrated, maintained, and operated on the catalytic oxidizers for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

~~D.8.8 Monitoring~~

~~(a) Compliance with the 1,250EF minimum temperature will be monitored by computer collected data generated continuously.~~

~~(b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour average temperature records will be made available within five business days from request.~~

~~(c) The temperatures will be reported based on an eight-hour average.~~

~~(d) The oxidizers shall operate with a five (5) degree buffer such that if the eight hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour average temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.~~

~~(e) If a one-hour average temperature is less than the established minimum temperature, this will be considered noncompliance.~~

D.8.8 Parametric Monitoring

A continuous monitoring system shall be calibrated, maintained, and operated on the catalytic oxidizers for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the

continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

~~D.9.6 Monitoring~~

~~(a) Compliance with the 932EF minimum temperature will be monitored by computer collected data generated continuously.~~

~~(b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour average temperature records will be made available within five business days from request.~~

~~(c) The temperatures will be reported based on an eight-hour average.~~

~~(d) The MAG-VZ/5 shall operate with a five (5) degree buffer such that if the eight-hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour average temperatures shall be investigated to determine if any temperature feel below the actual minimum temperature.~~

~~(e) If a one-hour average temperature is less than the established minimum temperature, this will be considered noncompliance.~~

D.9.6 Parametric Monitoring

A continuous monitoring system shall be calibrated, maintained, and operated on the catalytic oxidizer for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

Comment 4:

Multiple conditions throughout the permit require performance testing and state that an oven tested should not be one that has already been tested. For example, the ten (10) Quartz ovens, listed in D.1, are controlled by two (2) oxidizers. All of these ovens and both oxidizers have been tested to date. Therefore, it is not possible to comply with this requirement. Phelps Dodge requests that the various testing requirements included in the permit be changed to indicate that an oven shall not be re-tested until all ten ovens have been tested.

Response to Comment 4:

The following changes have been made to clarify the testing requirements for the ovens and how to select the oven to be tested. Condition D.1.4 has been changed to indicate that testing must be conducted on one of the two thermal oxidizers controlling emissions from the ten (10) Quartz Fabric ovens. (Other changes are also shown that are a result of comments discussed elsewhere in this document.)

D.1.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.1.1, within fifty (50) months after issuance of this permit, the Permittee shall ~~perform VOC testing utilizing methods as~~ **conduct performance tests to verify VOC control efficiency as per Condition D.1.3 for the thermal oxidizers using methods** approved by the Commissioner.

(b) One representative ~~oven~~ **thermal oxidizer** from the **two oxidizers controlling the** ten (10) Quartz Fabric enamel ovens shall be tested. The ~~oven~~ **thermal oxidizer** tested shall **be the oxidizer in which the longest amount of time has elapsed since its**

previous test. ~~not be an oven that has previously been tested~~ **This test shall be repeated at least once every five years from the date of this valid compliance demonstration.**

(c) ~~Additionally, if a coating issued with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1,150EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 90% overall control efficiency.~~ **Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.1.3 for thermal oxidizers using methods approved by the Commissioner.**

D.2.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.2.1, within fifty (50) months after issuance of this permit, the Permittee shall ~~perform VOC testing utilizing methods as~~ **conduct performance tests to verify VOC control efficiency as per Condition D.2.3 for thermal oxidizers** using methods approved by the Commissioner.

(b) One representative oven from the four (4) Lepel Quartz Fabric enamel ovens shall be tested. The oven tested shall **be the oven in which the longest amount of time has elapsed since its previous test.** ~~not be an oven that has previously been tested~~ **This test shall be repeated at least once every five years from the date of this valid compliance demonstration.**

(c) ~~Additionally, if a coating issued with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1,150EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 90% overall control efficiency.~~ **Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.2.3 for thermal oxidizers using methods approved by the Commissioner.**

D.3.~~7~~**5** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.3.1 and D.3.2, within fifty (50) months after issuance of this permit, the Permittee shall ~~perform VOC testing utilizing methods as~~ **conduct performance tests to verify VOC control efficiency as per Conditions D.3.1 for thermal oxidizers using methods** approved by the Commissioner.

(b) ~~Additionally, if a coating issued with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1150EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 91.1% overall control efficiency.~~ **Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.3.1 for thermal oxidizers using methods approved by the Commissioner.**

D.4.~~5~~**4** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.4.1, within fifty (50) months after issuance of this permit, the Permittee shall ~~perform VOC testing utilizing methods as~~

conduct performance tests to verify VOC control efficiency as per Condition D.4.1 for thermal oxidizers using methods approved by the Commissioner.

(b) One representative oven from the four (4) SICME ES enamel ovens shall be tested. The oven tested shall **be the oven in which the longest amount of time has elapsed since its previous test.** ~~not be an oven that has previously been tested~~ **This test shall be repeated at least once every five years from the date of this valid compliance demonstration.**

(c) ~~Additionally, if a coating issued with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1,400EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 96.7% overall control efficiency.~~ **Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.4.1 for thermal oxidizers using methods approved by the Commissioner.**

D.5.4 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.5.1, within sixty (60) days after issuance of this permit, the Permittee shall ~~perform VOC testing utilizing methods as~~ **conduct performance tests to verify VOC control efficiency as per Condition D.5.3 for thermal oxidizer using methods** approved by the Commissioner.

(b) One representative oven from the six (6) Square/Rectanglar enamel ovens shall be tested. The oven tested shall **be the oven in which the longest amount of time has elapsed since its previous test.** ~~not be an oven that has previously been tested~~ **This test shall be repeated at least once every five years from the date of this valid compliance demonstration.**

(c) ~~Additionally, if a coating is used with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1100EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 85% overall control efficiency.~~ **Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.5.3 for thermal oxidizers using methods approved by the Commissioner.**

D.6.4 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.6.1, within sixty (60) days after issuance of this permit, the Permittee shall ~~perform VOC testing utilizing methods as~~ **conduct performance tests to verify VOC control efficiency as per Condition D.6.3 for thermal oxidizer using methods** approved by the Commissioner.

(b) One representative oven from the twelve (12) MOCO enamel ovens shall be tested. The oven tested shall **be the oven in which the longest amount of time has elapsed since its previous test.** ~~not be an oven that has previously been tested~~ **This test shall be repeated at least once every five years from the date of this valid compliance demonstration.**

(c) ~~Additionally, if a coating issued with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1100EF required minimum temperature it will be considered a violation unless the Permittee~~

~~performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 85% overall control efficiency.~~ **Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.6.3 for thermal oxidizers using methods approved by the Commissioner.**

D.7.~~6~~**5** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.7.1, within twenty-four (24) months after issuance of this permit, the Permittee shall ~~perform VOC testing utilizing methods as~~ **conduct performance tests to verify VOC control efficiency as per Condition D.7.1 for catalytic oxidizers using methods** approved by the Commissioner. **Testing shall also be conducted every twenty-four (24) months after this first test.**

(b) One representative oven from the three (3) wire enameling pilot ovens shall be tested. The oven tested shall ~~not be an oven that has previously been tested~~ **be the oven with the oldest catalyst life that has not been tested since the issuance of this permit. Oldest catalyst refers to the longest serving catalyst since last activation.** ~~The catalyst of the oven chosen to be tested shall be on its second year of life. The test shall be done within the last 2 months of this second year of life of the catalyst.~~

(c) Within twenty-four (24) months of issuance of this permit and every twenty-four (24) months thereafter, the Permittee shall remove the catalyst from each oven and have the catalyst vendor conduct a catalyst activity analysis. Catalysts with percent activity less than the catalyst activity of the oldest catalyst must be replaced or a stack test must be conducted to show that a 94.8% overall control efficiency is being achieved.

(~~c~~ **d**) ~~Additionally, if a coating issued with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1,076~~~~E~~~~F required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 94% overall control efficiency.~~ **Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.7.4 for catalytic oxidizers using methods approved by the Commissioner.**

D.8.~~7~~**5** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.8.1 and D.8.2, within twenty-four (24) months after issuance of this permit, the Permittee shall ~~perform VOC testing utilizing methods as~~ **conduct performance tests to verify VOC control efficiency as per Condition D.8.1 for catalytic oxidizers using methods** approved by the Commissioner. **Testing shall also be conducted every twenty-four (24) months after this first test.**

(b) One representative oven from the two (2) wire enameling ovens shall be tested. The oven tested shall ~~not be an oven that has previously been tested~~ **be the oven with the oldest catalyst life that has not been tested since the issuance of this permit. Oldest catalyst refers to the longest serving catalyst since last activation.** ~~The catalyst of the oven chosen to be tested shall be on its second year of life. The test shall be done within the last 2 months of this second year of life of the catalyst.~~

(c) Within twenty-four (24) months of issuance of this permit and every twenty-four (24) months thereafter, the Permittee shall remove the catalyst from each oven and have the catalyst vendor conduct a catalyst activity analysis. Catalysts with

percent activity less than the catalyst activity of the oldest catalyst must be replaced or a stack test must be conducted to show that a 92.3% overall control efficiency is being achieved.

(c**d**) ~~Additionally, if a coating issued with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1,250EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 92.3% overall control efficiency.~~ **Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.8.3 for catalytic oxidizers using methods approved by the Commissioner.**

D.9.~~5~~**4** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.9.1, ~~within 60 days after achieving maximum rate, but not less than 180 days after initial start-up~~, **within twenty-four (24) months after issuance of this permit,** the Permittee shall ~~perform VOC testing utilizing methods as~~ **conduct performance tests to verify VOC control efficiency as per Condition D.9.1 for catalytic oxidizers using methods** approved by the Commissioner. **Testing shall also be conducted every twenty-four (24) months after this first test.**

(b) ~~Additionally, if a coating is used with a VOC content higher than what was used during the stack test required in (a) above or if the temperature falls below the 932EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 92.3% overall efficiency.~~ **One representative oven shall be tested. The oven tested shall be the oven with the oldest catalyst life that has not been tested since the issuance of this permit. Oldest catalyst refers to the longest serving catalyst since last activation.**

(c) Within twenty-four (24) months of issuance of this permit and every twenty-four (24) months thereafter, the Permittee shall remove the catalyst from each oven and have the catalyst vendor conduct a catalyst activity analysis. Catalysts with percent activity less than the catalyst activity of the oldest catalyst must be replaced or a stack test must be conducted to show that a 92.3% overall control efficiency is being achieved.

(d) Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.9.1 for catalytic oxidizers using methods approved by the Commissioner.

Comment 5:

The minimum 1400°F temperature, listed in Condition D.4.5, is redundant and not necessary as the temperature is listed in D.4.6. Please remove the temperature reference in Condition D.4.5. Additionally, the temperature for the source in monitored in Celsius. Therefore, the conditions should indicate the minimum temperatures in Celsius.

Response to Comment 5:

IDEM has decided not to list the minimum temperature in the respective testing requirements as it may change depending on compliance testing. The minimum oxidizer temperatures are listed in both degrees Fahrenheit and degrees Celsius. The following changes have been made to

Condition D.4.5 (now D.4.4) to reflect these changes and those identified previously. (Other changes are also shown that are a result of comments discussed elsewhere in this document.)

D.4.~~5~~**4** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.4.1, within fifty (50) months after issuance of this permit, the Permittee shall ~~perform VOC testing utilizing methods as~~ **conduct performance tests to verify VOC control efficiency as per Condition D.4.1 for thermal oxidizer using methods** approved by the Commissioner.

(b) One representative oven from the four (4) SICME ES enamel ovens shall be tested. The oven tested shall **be the oven in which the longest amount of time has elapsed since its previous test.** ~~not be an oven that has previously been tested~~ **This test shall be repeated at least once every five years from the date of this valid compliance demonstration.**

(c) ~~Additionally, if a coating issued with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1,400EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 96.7% overall control efficiency.~~ **Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.4.1 for thermal oxidizers using methods approved by the Commissioner.**

Comment 6:

Condition D.7.4(a) limits the overall control efficiency to 94.8% while Conditions D.7.4(b)(c), and D.7.6(c) indicate that the required control efficiency is 94%. Which is correct?

Response to Comment 6:

Pursuant to the Registration issued on February 2, 1994 (CP-003-3268-0013), the integral internal catalytic oxidizers associated with the pilot ovens shall operate with an overall efficiency of not less then 94.8% at all times when the wire enameling oven is in operation. Changes have been made to Condition D.7.1 to clarify that the overall efficiency must be greater than 94.8%. Due to other changes in section D.7, discussed later in this document, the efficiency now appear in D.7.1 and D.7.6. The following changes indicate the changes to those conditions as well as to Condition D.7.1. (Other changes are also shown that are a result of comments discussed elsewhere in this document.)

D.7.1 Volatile Organic Compounds [326 IAC 8-2-8]

(a) Pursuant to 326 IAC 8-2-8 (Magnet Wire Coating Operations) and CP ~~113~~ **003**-3268-00013 issued on February 2, 1994, the ~~volatile organic content less water of electrically insulating varnishes or enamel applied to aluminum or copper wire for use in electrical machinery shall be limited to~~ **owner or operator shall not allow the discharge into the atmosphere of VOC in excess of** 1.7 pounds VOC per gallon of coating ~~less water~~**, excluding water, as** delivered to the applicator ~~determined after use of the thermal oxidizer.~~

~~(b) The limit includes the evaporation of thinners being added to coatings to adjust viscosity, therefore, it is necessary to keep coating and solvent containers covered at all times to prevent solvent evaporation.~~

(b) The equivalent pounds of VOC per gallon of coating solids (as applied) shall be limited to less than 2.21, when L is equal to 1.7 pounds of VOC per gallon of

coating and D is equal to 7.36 pounds of VOC per gallon of coating.

(c) Pursuant to 326 IAC 8-1-2 (b), the enameling oven's VOC emission shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon coating solids, allowed in (a).

This equivalency was determined by the following equation:

$$E = L / (1 - (L/D))$$

Where

L= Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating
D= Density of VOC in coating in pounds per gallon of VOC
E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied

Actual solvent density shall be used to determine compliance of surface coating operation using the compliance methods in 326 IAC 8-1-2 (a).

(d) Pursuant to 326 IAC 8-1-2(c), the equivalent overall control efficiency of the thermal oxidizer shall be no less than 94.8% calculated by the following equation:

$$O = \frac{V - E}{V} \times 100$$

Where:

V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied.
E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.
O = Equivalent overall control efficiency of the capture system and control device as a percentage.

~~D.7.4 Volatile Organic Compounds (VOC)~~

~~(a) Pursuant to the Registration issued on February 2, 1994 (CP-003-3268-0013), the integral internal catalytic oxidizers associated with the pilot ovens shall operate with an overall efficiency of not less then 94.8% at all times when the wire enameling oven is in operation.~~

~~(b) The 94% overall efficiency is necessary to ensure compliance with 326 IAC 8-2-8 and Condition D.7.2.~~

~~(c) The integral internal catalytic oxidizers shall be operated at or above 1,076 Fahrenheit or a temperature determined during compliance tests to maintain a minimum 94% overall efficiency.~~

~~(d) The VOC content of electrically insulating varnishes or enamel applied to aluminum or copper wire for use in electrical machinery shall not exceed 7.00 pounds VOC per gallon of coating less water. This is equivalent to a VOC content of 1.7 pounds VOC per gallon of coating less water after the effect of the internal catalytic oxidizers.~~

D.7.6 Catalytic Oxidizer

(a) From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the catalytic oxidizer at or above the hourly average temperature of 580 degrees Celsius.

(b) The Permittee shall determine the temperature from the most recent valid stack test that demonstrates compliance with limits in Conditions D.7.1 and D.7.2, as approved by IDEM.

(c) From the date of the approved stack test results are available, the Permittee shall operate the catalytic oxidizers at or above the hourly average temperature as observed during the compliant stack test.

Comment 7:

Condition D.8.7(b) requires that catalytic oxidizer to be tested after the catalyst is at least 22 months old but less than 24 months old. What is the procedure for changing out the catalyst if the catalyst test shows the catalyst is still good and does not required a change out? The permit should allow the life of the catalyst to be extended based on test results without opening or modifying the permit.

Response to Comment 7:

The following changes have been made to clarify the testing requirements listed in section D.8, clarify which oxidizer shall be tested, when the catalyst will be changed, and allow for the further use of an existing catalyst if a catalyst activity analysis indicates that the catalyst is sufficiently active. (Other changes are also shown that are a result of comments discussed elsewhere in this document.)

D.8.~~7~~**5** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.8.1 and D.8.2, within twenty-four (24) months after issuance of this permit, the Permittee shall ~~perform VOC testing utilizing methods as~~ **conduct performance tests to verify VOC control efficiency as per Condition D.8.1 for catalytic oxidizers using methods** approved by the Commissioner. **Testing shall also be conducted every twenty-four (24) months after this first test.**

(b) One representative ~~oven~~ **catalytic oxidizer** from the two (2) wire enameling pilot ovens shall be tested. The ~~oven~~ **catalytic oxidizer** tested shall ~~not be an oven that has previously been tested~~ **be the oxidizer with the oldest catalyst life that has not been tested since the issuance of this permit. Oldest catalyst refers to the longest serving catalyst since last activation.** ~~The catalyst of the oven chosen to be tested shall be on its second year of life. The test shall be done within the last 2 months of this second year of life of the catalyst.~~

(c) Within twenty-four (24) months of issuance of this permit and every twenty-four (24) months thereafter, the Permittee shall remove the catalyst from each oven and have the catalyst vendor conduct a catalyst activity analysis. Catalysts with percent activity less than the catalyst activity of the oldest catalyst must be replaced or a stack test must be conducted to show that a 92.3% overall control efficiency is being achieved.

(~~c~~ **d**) ~~Additionally, if a coating issued with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1,250EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure~~

~~compliance with the 92.3% overall control efficiency.~~ **Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.8.1 for catalytic oxidizers using methods approved by the Commissioner.**

Comment 8:

Conditions D.7.7, D.8.8, and D.9.6 require temperature monitoring of the internal catalyst associated with the ovens. The catalysts are internal to the ovens and integral to the process. If the catalyst is not operating correctly, the ovens will not be able to produce a quality product. Therefore, Phelps Dodge proposes that the temperature monitoring for the catalysts associated with these ovens be removed from the permit. Phelps Dodge requests a meeting with IDEM to discuss this issue further if IDEM has questions or feels that the temperature monitoring should remain.

Response to Comment 8:

IDEM understands that the catalytic oxidizers, listed in sections D.7, D.8, and D.9 are integral to the process and function to produce to quality product. However, they must operate in such a manner as to ensure compliance with 326 IAC 8-2-8 (Volatile Organic Compounds) and render the requirements of 326 IAC 2-2 (PSD) not applicable. Compliance with the applicable rules can only be determined if the temperatures, established to achieve the required efficiencies, are monitored. As a result, temperature monitoring requirements shall remain in the permit for the ovens listed in sections D.7, D.8, and D.9.

Comment 9:

Condition D.9.5(a) requires the ovens to be tested within 60 days of achieving maximum rate but not less than 180 days after initial startup. The equipment has been installed and started. The initial performance test was conducted on January 17, 2001. The test demonstrated 98.4% overall control. We suggest modifying Condition D.9.5(a) with language similar to D.8.7 and should allow for longer catalyst life if testing demonstrates that the catalyst is still active.

Response to Comment 9:

Condition D.9.5 has been modified, as follows, to indicate that the equipment has been installed and started and to allow for additional use of the catalyst if testing demonstrates that the catalyst is still active. (Other changes are also shown that are a result of comments discussed elsewhere in this document.)

D.9.~~5~~**4** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.9.1, ~~within 60 days after achieving maximum rate, but not less than 180 days after initial start-up~~, **within twenty-four (24) months after issuance of this permit,** the Permittee shall ~~perform VOC testing utilizing methods as~~ **conduct performance tests to verify VOC control efficiency as per Condition D.9.1 for catalytic oxidizers using methods** approved by the Commissioner. **Testing shall also be conducted every twenty-four (24) months after this first test.**

(b) ~~Additionally, if a coating is used with a VOC content higher than what was used during the stack test required in (a) above or if the temperature falls below the 932EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 92.3% overall efficiency.~~ **One representative catalytic oxidizer from the two (2) wire enameling pilot ovens shall be tested. The oven tested shall be the oven**

with the oldest catalyst life that has not been tested since the issuance of this permit. Oldest catalyst refers to the longest serving catalyst since last activation.

(c) Within twenty-four (24) months of issuance of this permit and every twenty-four (24) months thereafter, the Permittee shall remove the catalyst from each oven and have the catalyst vendor conduct a catalyst activity analysis. Catalysts with percent activity less than the catalyst activity of the oldest catalyst must be replaced or a stack test must be conducted to show that a 92.3% overall control efficiency is being achieved.

(d) Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.9.1 for catalytic oxidizers using methods approved by the Commissioner.

Comment 10:

The SICME-NER (unit 650) and SICME-VGR (unit 310) ovens will not be installed at this time. Therefore, these facilties and associated conditions should be removed from the permit. Phelps Dodge will surrender the Construction Permit for this source to IDEM under separate cover.

Response to Comment 10:

Section D.10, and the respective reporting form, have been removed from the permit since ovens SICME-NER and SICME-VGR will not be constructed. Section A has been modified, as follows, to document this change:

SECTION A

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

~~(ll) One (1) SICME-NER wire enameling oven, emission unit number 650, installed 2001, with a maximum capacity of 366 pounds magnet wire per hour, equipped with a thermal oxidizer (not integral) for emissions control, exhausted through stack 407 through 414, 416, and 417.~~

~~(mm) One (1) SICME-VGR wire enameling oven, emission unit number 310, installed 2001, with a maximum capacity of 366 pounds magnet wire per hour, equipped with a thermal oxidizer (not integral) for VOC control, exhausted through stacks 405 and 406.~~

Comment 11:

The MAG-VEL8 oven (unit 1071) will not be installed at this time. Therefore, this facility and associated conditions should be removed from the permit. Phelps Dodge will surrender the Construction Permit for this source to IDEM under separate cover.

Response to Comment 11:

Section D.11, and the respective reporting form, have been removed from the permit since the MAG-VEL8 oven (unit 1071) will not be constructed at this time. Section A has been modified, as follows, to document this change:

SECTION A

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

~~(nn) One (1) MAG-VEL8 wire enameling pilot oven, emission unit number 1071, installed 2001, with a maximum capacity of 244 pounds magnet wire per hour, with an internal catalytic oxidizer integral to the process, exhausted through stacks 1070 and 1071.~~

Comment 12:

The MAG HM8 oven will not be installed at this time. Therefore, this facility and associated conditions should be removed from the permit.

Response to Comment 12:

Section D.15 has been removed from the permit since the MAG HM8 oven will not be constructed at this time. Section A has been modified, as follows, to document this change. Note that because of the removal of sections D.10, D.11, and D.15, section D.12 is now listed as D.10, section D.13 is now listed as D.11, and D.14 is now listed as D.12.

SECTION A

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1 (21):

~~(c) Emission units whose potential emissions meet the exemption levels specified in 326 IAC 2-1.1-3(d)(1):~~

~~(1) One (1) MAG HM 8 wire enameling hot melt pilot oven with an integral internal catalytic oxidizer, installed April 1998, with a maximum capacity of 116 pounds of magnet wire per hour. Emissions shall be exhausted at Stack/Vent 1070-1071.~~

Comment 13:

Condition D.3.10 appears to be redundant with conditions contained in Section C, which covers General Record Keeping requirements.

Response to Comment 13:

Condition D.3.10 states that a report is required and reiterates what is required of such a report. The language contained in D.3.10 is consistent with Section C - General Reporting Requirements. No changes have been made as a result of this comment.

Comment 14:

Conditions D.6.1 and D.6.3 require an overall reduction of 85%. Those limits are based on 326 IAC 8-6-2. Condition D.6.4(c) states that an overall efficiency of 90% is required. We feel that this condition should be changed to 85%.

Response to Comment 14:

Pursuant to 326 IAC 8-6-2, the VOC emitted from the ovens shall be reduced by at least 85%. Changes have been made to Condition D.6.1 to clarify that the overall efficiency must be at least 85%. Due to other changes in section D.6, discussed in this document, the efficiency no longer

appears in D.6.4. Instead, Condition D.6.4 references Conditions D.6.1 and D.6.3 which require a minimum overall efficiency of 85%. The following changes have been made to Conditions D.6.1, D.6.3, and D.6.4. (Other changes are also shown that are a result of comments discussed elsewhere in this document.)

D.6.1 Volatile Organic Compound (VOC)

(a) Pursuant to 326 IAC 8-6 (Organic Solvent Emission Limitations), the VOC emitted from the ~~source~~ **twelve (12) MOCO wire enameling ovens, emission units 351-352, 353-354, 355-356, 367-368, 365-366, 363-364, 373-374, 371-372, 369-370, 357-358, 359-360, and 361-362** shall be reduced by at least **eighty-five percent (**85%**).** ~~from emissions which would occur before the application of any control equipment or process.~~

~~(b) The twelve (12) MOCO wire enameling ovens, emission units 351-352, 353-354, 355-356, 367-368, 365-366, 363-364, 373-374, 371-372, 369-370, 357-358, 359-360, and 361-362 were constructed prior to 1980, therefore, there are no other applicable VOC requirements for these emission units.~~

(~~c~~**b**) Any change or modification which may increase potential emissions from the twelve (12) MOCO wire enameling ovens shall require prior approval from the OAQ before such change may occur.

D.6.4 Thermal Oxidizer

In order to satisfy the requirements of 326 IAC 8-6 and Condition D.6.1, the external thermal oxidizers must operate such that the overall control efficiency is at least eighty-five percent (85%).

~~D.6.3 Volatile Organic Compound (VOC)~~

~~(a) To ensure compliance with Condition D.6.1, the external thermal oxidizers associated with these facilities shall operate with an overall efficiency of not less than 85% at all times when the facilities are in operation.~~

~~(b) The external thermal oxidizers shall be operated at or above 1100EF a temperature determined during compliance tests to maintain a minimum 85% overall efficiency.~~

D.6.~~4~~**5** Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.6.1, within sixty (60) days after issuance of this permit, the Permittee shall ~~perform VOC testing utilizing methods as~~ **conduct performance tests to verify VOC control efficiency as per Condition D.6.3 for thermal oxidizer using methods** approved by the Commissioner.

(b) One representative oven from the twelve (12) MOCO enamel ovens shall be tested. The oven tested shall **be the oven in which the longest amount of time has elapsed since its previous test.** ~~not be an oven that has previously been tested~~ **This test shall be repeated at least once every five years from the date of this valid compliance demonstration.**

(c) ~~Additionally, if a coating issued with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1100EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 85% overall control efficiency.~~ **Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.6.3 for thermal oxidizers using methods approved by the Commissioner.**

Comment 15:

Condition D.12.4(b) is repetitive with Conditions D.12.5 and Section C - General Record Keeping Requirements.

Response to Comment 15:

Condition D.12.4(b) refers to Section C - General Reporting Requirements and reminds the Permittee that all records shall be maintained in accordance with that section. Condition D.12.4(b) is not inconsistent with any other section in the permit. No changes have been made as a result of this comment.

Upon further review, the OAQ has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted). The Table of Contents has been modified to reflect these changes.

Sections B and C

1. B.8 Compliance with Permit Conditions has been revised to clarify that noncompliance with any requirement of this permit may result in an enforcement action against the permittee, an action to modify, revoke, reissue or terminate the source's permit, and/or a denial of the permittee's application to renew the permit. In addition, except for those permit conditions that are not federally enforceable, noncompliance is also a violation of the federal Clean Air Act.

B.8 Compliance with Permit Conditions [326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]

(a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit ~~except those specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act and~~ is grounds for:

(1) Enforcement action;

(2) Permit termination, revocation and reissuance, or modification; or

(3) Denial of a permit renewal application.

(b) Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act.

(~~b~~**c**) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(~~c~~**d**) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

Updates 2 through 6 have been made to incorporate the Article 2 rule revisions that were adopted on October 3, 2001, and became effective on January 19th, 2002. For more information about this rulemaking, refer to the October 2001 Air Pollution Control Board Packet which can be found on the internet at http://www.state.in.us/idem/air/rules/apcb/packets/index.html. The rule revisions were published in the February 1, 2002 Indiana Register which can be found on the internet at http://www.IN.gov/legislative/register/index-25.html.

2. Add the new rule cite to B.2 Permit Term.

B.2 Permit Term [326 IAC 2-7-5(2)] **[326 IAC 2-1.1-9.5]**

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

3. B.12 Emergency Provisions (a)(b) and (g) have been revised to reflect rule changes to 326 IAC 2-7-16. This section of the rule is now consistent with 40 CFR 70.6(g) and provides an affirmative defense to an action brought for non-compliance with technology based emission limitations only.

B.12 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation~~, except as provided in 326 IAC 2-7-16.~~

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a ~~health-based or~~ technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(g) ~~Operations may continue during an emergency only if the following conditions are met~~:

~~(1)~~ If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

~~(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:~~

~~(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and~~

~~(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value.~~

~~Any operation shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.~~

4. B.14 Multiple Exceedances has been deleted, because 326 IAC 2-7-5(1)(E) has been repealed, because it conflicted with 40 CFR 70.6(a)(6).

~~B.14 Multiple Exceedances [326 IAC 2-7-5(1)(E)]~~

~~Any exceedance of a permit limitation or condition contained in this permit, which occurs contemporaneously with an exceedance of an associated surrogate or operating parameter established to detect or assure compliance with that limit or condition, both arising out of the same act or occurrence, shall constitute a single potential violation of this permit.~~

5. B.14 Prior Permits Superseded was added to the permit to help clarify the intent of the new rule 326 IAC 2-1.1-9.5.

B.14 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either

(1) incorporated as originally stated,

(2) revised, or

(3) deleted

by this permit.

(b) All previous registrations and permits are superseded by this permit.

6. Remove (b) from B.13 Permit Shield. Since B.14 Prior Permits Superceded has been added to the permit, it is not necessary for this statement to be in this condition.

B.13 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

~~(b) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits. All previously issued operating permits are superseded by this permit.~~

7. The IDEM, OAQ, has revised Condition B.15 Deviations from Permit Requirements and Conditions to address concerns regarding the independent enforceability of permit conditions [see 40 CFR 70.6(a)(6)(i)]. B.15 was revised to remove language that could be considered to grant exemptions from permit requirements and to clarify reporting obligations.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. ~~Deviations that are required to be reported by an applicable requirement~~ A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and ~~do~~ **does** not need to be included in this report.

The ~~notification by the Permittee~~ **Quarterly Deviation and Compliance Monitoring Report** does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit ~~or a rule. It does not include:~~

~~(1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or~~

~~(2) Failure to implement elements of the Preventive Maintenance Plan unless such failure has caused or contributed to a deviation.~~

~~A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.~~

(a) Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring

Report.

8. In order to be consistent with language in 326 IAC 2-7-12(b)(2), the "(D)(i)" of rule listed in (b) of Permit Revisions Under Economic Incentives and Other Programs condition has been removed.

B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12 (b)(2)]

(b) Notwithstanding 326 IAC 2-7-12(b)(1)~~(D)(i)~~ and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

9. Part 70 requires any application form, report, or compliance certification to be certified by the Responsible Official. IDEM, OAQ has revised C.7 Asbestos Abatement Projects to clarify that the asbestos notification does not require a certification by the responsible official, but it does need to be certified by the owner or operator. IDEM, OAQ has revised C.17 Actions Related to Noncompliance Demonstrated by a Stack Test; a certification by the responsible official is required for the notification sent in response to non-compliance with a stack test.

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited**, pursuant to the provisions of 40 CFR 61, Subpart M,** is federally enforceable.

C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do ~~not~~ require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

10. In Condition C.14 Emergency Reduction Plans, (b) was removed from the condition because an ERP had already been submitted.

C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on February 27, 1998.

~~(b) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.~~

(~~c~~**b**) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level.
[326 IAC 1-5-3]

11. The IDEM, OAQ has restructured C.16 to clarify the contents and implementation of the compliance response plan. The language regarding the OAQ's discretion to excuse failure to perform monitoring under certain conditions has been deleted. The OAQ retains this discretion to excuse minor incidents of missing data; however, it is not necessary to state criteria regarding the exercise of that discretion in the permit. In C.16 (c)(2) "administrative amendment" has been revised to "minor permit modification", because 326 IAC 2-7-11(a)(7) has been repealed. The title Compliance Monitoring Plan - Failure to Take Response Steps has been changed to Compliance Response Plan - Preparation, Implementation, Records, and Reports throughout the permit.

C.16 Compliance ~~Monitoring~~ **Response** Plan - ~~Failure to Take Response Steps~~ **Preparation, Implementation, Records, and Reports** [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) The Permittee is required to **prepare** ~~implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. The compliance monitoring plan can be either an entirely new document, consist in whole of information contained in other documents, or consist of a combination of new information and information contained in other documents. If the compliance monitoring plan incorporates by reference information contained in other documents, the Permittee shall identify as part of the compliance monitoring plan the documents in which the information is found. The elements of the compliance monitoring plan are:~~

~~(1) This condition;~~

~~(2) The Compliance Determination Requirements in Section D of this permit;~~

~~(3) The Compliance Monitoring Requirements in Section D of this permit;~~

~~(4) The Record Keeping and Reporting Requirements in Section C (General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and~~

~~(5) A~~ **a** Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. **A** CRP~~'s~~ shall be submitted to IDEM, OAQ upon request ~~and shall be subject to review and approval by IDEM, OAQ,~~. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee**, supplemented from time to time by the Permittee,** ~~and~~ maintained on site, and ~~is~~ comprised of:

~~(A)~~**(1)** Reasonable response steps that may be implemented in the event that ~~compliance related information indicates that~~ a response step is needed pursuant to the requirements of Section D of this permit; and **an expected timeframe for taking reasonable response steps.**

~~(B) A time schedule for taking reasonable response steps including a schedule for devising additional response steps for situations that may not have been predicted.~~

(2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.

(b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition

as follows: ~~Failure to take reasonable response steps may constitute a violation of the permit.~~

(1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or

(2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

(3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.

(4) Failure to take reasonable response steps shall constitute a violation of the permit.

(c) ~~Upon investigation of a compliance monitoring excursion, the~~ **The** Permittee is ~~excused from taking~~ **not required to take any** further response steps for any of the following reasons:

(1) A false reading occurs due to the malfunction of the monitoring equipment **and** ~~This shall be an excuse from taking further response steps providing that~~ prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for ~~an administrative amendment~~ **a minor permit modification** to the permit, and such request has not been denied.

(3) An automatic measurement was taken when the process was not operating.

(4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.

(d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.

~~(d)~~**(e)** ~~Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken.~~ **The Permittee shall record all instances when response steps are taken.** In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

~~(e)~~**(f)** **Except as otherwise provided by a rule or provided specifically in Section D,** all monitoring **as** required in Section D shall be performed ~~at all times~~ **when** the ~~equipment~~ **emission unit** is operating, **except for time necessary to perform quality assurance and maintenance activities.** ~~If monitoring is required by Section D and the equipment is not operating, then the Permittee may record the fact that the equipment is not~~

~~operating or perform the required monitoring.~~

~~(f) At its discretion, IDEM may excuse the Permittee's failure to perform the monitoring and record keeping as required by Section D, if the Permittee provides adequate justification and documents that such failures do not exceed five percent (5%) of the operating time in any quarter. Temporary, unscheduled unavailability of qualified staff shall be considered a valid reason for failure to perform the monitoring or record keeping requirements in Section D.~~

12. Upon further consideration, IDEM has made the following changes to the permit to: 1) add clarity regarding the emissions standards, testing, compliance determination, monitoring, and recording keeping requirements, 2) specify which oxidizers shall be tested with compliance testing is required, 3) add clarity to the background and requirements of 326 IAC 8-2-8, 4) and correct any typographical errors.

SECTION D.1

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Volatile Organic Compound (VOC)

(a) Pursuant to 326 IAC 8-6 (Organic Solvent Emission Limitations), the VOC emitted from the ~~source~~ **ten (10) Quartz Fabric wire enameling ovens, emission units 701-702, 703-704, 705-706, 707-708, 709-710, 804, 805, 808, 809 and 810,** shall be reduced by at least **eighty-five percent (**85%**)** ~~from emissions which would occur before the application of any control equipment or process~~.

~~(b) The ten (10) Quartz Fabric wire enameling ovens, emission units 701-702, 703-704, 705-706, 707-708, 709-710, 804, 805, 808, 809 and 810, were constructed prior to 1980, therefore, there are no other applicable VOC requirements for these emission units.~~

(c**b**) Any change or modification which may increase potential emissions from the ten (10) Quartz Fabric wire enameling ovens shall require prior approval from the OAQ before such change may occur.

D.1.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for ~~this facility~~ **these facilities** and ~~its~~ **their** control device**s**.

Compliance Determination Requirements

D.1.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

Pursuant to 326 IAC 8-1-2(a), the Permittee shall operate the thermal oxidizers to achieve compliance with Condition D.1.1.

D.1.~~3~~**4** Thermal Oxidizer Operation

(a) Pursuant to the Construction Permit issued on October 17, 1997 (CP 003-8609-00013), the **external** thermal oxidizers shall operate at all times that the ten (10) Quartz Fabric ovens are in operation. When operating, the **external** thermal oxidizers shall maintain a minimum operating temperature of ~~1,150 degrees Fahrenheit~~ **621 degrees Celsius** or a temperature **and** fan amperage, ~~and~~ **or** duct ~~velocity~~ **pressure,** determined in the compliance testing to maintain ~~an overall~~ **a destruction** efficiency of not less than **ninety percent (**90**%)** ~~percent~~ of volatile organic compound (VOC) **captured**.

(b) ~~The 90% efficiency is also necessary to ensure compliance with 326 IAC 8-6.~~ **In order to satisfy the requirements of 326 IAC 8-6 and Condition D.1.1, the external**

thermal oxidizers must operate with a minimum destruction efficiency of ninety percent (90%) and a minimum capture efficiency such that the overall control efficiency is at least eighty-five percent (85%).

D.1.~~4~~**5** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.1.1, within fifty (50) months after issuance of this permit, the Permittee shall ~~perform VOC testing utilizing methods as~~ **conduct performance tests to verify VOC control efficiency as per Condition D.1.3 for the thermal oxidizers using methods** approved by the Commissioner.

(b) One representative ~~oven~~ **thermal oxidizer** from the **two oxidizers controlling the** ten (10) Quartz Fabric enamel ovens shall be tested. The ~~oven~~ **thermal oxidizer** tested shall **be the oxidizer in which the longest amount of time has elapsed since its previous test.** ~~not be an oven that has previously been tested~~ **This test shall be repeated at least once every five years from the date of this valid compliance demonstration.**

(c) ~~Additionally, if a coating issued with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1,150EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 90% overall control efficiency.~~ **Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.1.3 for thermal oxidizers using methods approved by the Commissioner.**

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

~~D.1.5 Monitoring~~

~~(a) Compliance with the 1,150EF minimum temperature will be monitored by computer collected data generated continuously.~~

~~(b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour average temperature records will be made available within five business days from request.~~

~~(c) The temperatures will be reported based on an eight-hour average.~~

~~(d) The oxidizer shall operate with a five (5) degree buffer such that if the eight hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour average temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.~~

~~(e) If a one-hour average temperature is less than the established minimum temperature, this will be considered noncompliance.~~

D.1.6 Thermal Oxidizer

(a) From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizers at or above the hourly average temperature of 621 degrees Celsius.

(b) The Permittee shall determine the temperature and fan amperage, or duct pressure, from the most recent valid stack test that demonstrates compliance with limits in Condition D.1.1, as approved by IDEM.

(c) From the date of the approved stack test results are available, the Permittee shall operate the thermal oxidizers at or above the hourly average temperature and fan amperage, or duct pressure, as observed during the compliant stack test.

D.1.7 Parametric Monitoring

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizers for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizers are in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as indicated by the manufacturer or as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.6**8** Record Keeping Requirements

(a) To document compliance with Condition**s** D.1.1 and D.1.3**7**, the Permittee shall maintain**:** ~~records of the computer collected data.~~

(1) Records of the VOC emitted based on: VOC delivered to the applicators x (1 - % destruction efficiency/100) + VOC in cleaning solvent.

(2) Continuous temperature records (on an hourly average basis) for the thermal oxidizer and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.

(3) Daily records of the duct pressure or fan amperage.

(b) All records shall be maintained in accordance with Section C- General Record Keeping Requirements of this permit.

SECTION D.2

D.2.1 Volatile Organic Compound (VOC)

(a) Pursuant to 326 IAC 8-6 (Organic Solvent Emission Limitations), the VOC emitted from the ~~source~~ **four (4) Lepel Fabric wire enameling ovens, emission units 807, 806, 803 and 802** shall be reduced by at least **eighty-five percent (**85%**)** ~~from emissions which would occur before the application of any control equipment or process.~~

~~(b) The four (4) Lepel Fabric wire enameling ovens, emission units 807, 806, 803 and 802 were constructed prior to 1980, therefore, there are no other applicable VOC requirements for these emission units.~~

(~~c~~**b**) Any change or modification which may increase potential emissions from the four (4) Lepel Fabric wire enameling ovens shall require prior approval from the OAQ before

such change may occur.

D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for ~~this facility~~ **these facilities** and ~~its~~ **their** control device**s**.

Compliance Determination Requirements

D.2.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

Pursuant to 326 IAC 8-1-2(a), the Permittee shall operate the thermal oxidizers to achieve compliance with Condition D.2.1.

D.2.~~3~~**4** Thermal Oxidizer Operation

(a) Pursuant to the Construction Permit issued on October 17, 1997 (CP 003-8609-00013), the **external** thermal oxidizers shall operate at all times that the four (4) Lepel Fabric ovens are in operation. When operating, the **external** thermal oxidizers shall maintain a minimum operating temperature of ~~1,150 degrees Fahrenheit~~ **621 degrees Celsius** or a temperature **and** fan amperage ~~and~~ **or** duct ~~velocity~~ **pressure,** determined in the compliance testing to maintain ~~an overall~~ **a destruction** efficiency of not less than **ninety percent (**90**%)** ~~percent~~ of volatile organic compound (VOC) **captured**.

(b) ~~The 90% efficiency is also necessary to ensure compliance with 326 IAC 8-6.~~ **In order to ensure compliance with Condition D.2.1 and (a) above, the external thermal oxidizers must operate with a minimum destruction efficiency of ninety percent (90%) and a minimum capture efficiency such that the overall control efficiency is at least eighty-five percent (85%).**

D.2.~~4~~**5** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.2.1, within fifty (50) months after issuance of this permit, the Permittee shall ~~perform VOC testing utilizing methods as~~ **conduct performance tests to verify VOC control efficiency as per Condition D.2.3 for thermal oxidizer using methods** approved by the Commissioner.

(b) One representative oven from the four (4) Lepel Quartz Fabric enamel ovens shall be tested. The oven tested shall **be the oven in which the longest amount of time has elapsed since its previous test.** ~~not be an oven that has previously been tested~~ **This test shall be repeated at least once every five years from the date of this valid compliance demonstration.**

(c) ~~Additionally, if a coating issued with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1,150EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 90% overall control efficiency.~~ **Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.2.3 for thermal oxidizers using methods approved by the Commissioner.**

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

~~D.2.5 Monitoring~~

~~(a) Compliance with the 1,150EF minimum temperature will be monitored by computer collected data generated continuously.~~

~~(b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour average temperature records will be made available within five business days from request.~~

~~(c) The temperatures will be reported based on an eight-hour average.~~

~~(d) The oxidizer shall operate with a five (5) degree buffer such that if the eight hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour average temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.~~

~~(e) If a one-hour average temperature is less than the established minimum temperature, this will be considered noncompliance.~~

D.2.6 Thermal Oxidizer

(a) From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizers at or above the hourly average temperature of 621 degrees Celsius.

(b) The Permittee shall determine the temperature and fan amperage, or duct pressure, from the most recent valid stack test that demonstrates compliance with limits in Condition D.2.3, as approved by IDEM.

(c) From the date of the approved stack test results are available, the Permittee shall operate the thermal oxidizers at or above the hourly average temperature and fan amperage, or duct pressure, as observed during the compliant stack test.

D.2.7 Parametric Monitoring

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizers for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizers are in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as indicated by the manufacturer or as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.~~6~~**8** Record Keeping Requirements

(a) To document compliance with Condition D.2.1 and D.2.~~3~~**7**, the Permittee shall maintain**:** ~~records of the computer collected data.~~

(1) Records of the VOC emitted based on: VOC delivered to the applicators x (1 - % destruction efficiency/100) + VOC in cleaning solvent.

(2) Continuous temperature records (on an hourly average basis) for the

thermal oxidizer and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.

(3) Daily records of the duct pressure or fan amperage.

(b) All records shall be maintained in accordance with Section C- General Record Keeping Requirements of this permit.

SECTION D.3

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Volatile Organic Compounds [326 IAC 8-2-8]

(a) Pursuant to 326 IAC 8-2-8 (Magnet Wire Coating Operations) and CP 003-8609-00013 issued on October 17, 1997, the ~~volatile organic content less water of electrically insulating varnishes or enamel applied to aluminum or copper wire for use in electrical machinery shall be limited to~~ **owner or operator shall not allow the discharge into the atmosphere of VOC in excess of** 1.7 pounds VOC per gallon of coating ~~less water~~**, excluding water, as** delivered to the applicator ~~determined after use of the thermal oxidizer.~~

~~(b) The limit includes the evaporation of thinners being added to coatings to adjust viscosity, therefore, it is necessary to keep coating and solvent containers covered at all times to prevent solvent evaporation.~~

(b) The equivalent pounds of VOC per gallon of coating solids (as applied) shall be limited to less than 2.21, when L is equal to 1.7 pounds of VOC per gallon of coating and D is equal to 7.36 pounds of VOC per gallon of coating.

(c) Pursuant to 326 IAC 8-1-2 (b), the enameling oven's VOC emission shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon coating solids, allowed in (a).

This equivalency was determined by the following equation:

$$E = L / (1 - (L/D))$$

Where

L= Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating
D= Density of VOC in coating in pounds per gallon of VOC
E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied

Actual solvent density shall be used to determine compliance of surface coating operation using the compliance methods in 326 IAC 8-1-2 (a).

(d) Pursuant to 326 IAC 8-1-2(c), the equivalent overall control efficiency of the thermal oxidizer shall be no less than 91.1% calculated by the following equation:

$$O = \frac{V - E}{V} \times 100$$

Where:

V = The actual VOC content of the coating or, if multiple coatings are

used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied.

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

O = Equivalent overall control efficiency of the capture system and control device as a percentage.

D.3.2 PSD Limit [326 IAC 2-2] [40 CFR 52.21]

Pursuant to CP 003-8609-00013 issued on October 17, 1997, the VOC emissions from the Quartz Fabric oven (emission unit 811)(Section D.3), the two (2) MAG VZ6 ovens (Section D.8), and the applicator cleaning area (Section D.~~12~~**10**) shall be limited to less than 40 tons VOC per twelve (12) consecutive month period. An increase in total VOC emissions from these equipment above 40 tons per year shall require a PSD permit pursuant to 326 IAC 2-2 and 40 CFR 52.21 before such change may occur.

D.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.3.4 Volatile Organic Compounds (VOC) **[326 IAC 8-1-2]**

~~(a) Pursuant to the Construction Permit issued on October 17, 1997 (CP 003-8609-00013), the external thermal oxidizer associated with oven 811 shall operate with an overall efficiency of not less then 91.1% at all times when the wire enameling oven is in operation.~~

~~(b) The 91.1% overall efficiency is necessary to ensure compliance with 326 IAC 8-2-8 and to ensure 326 IAC 2-2 does not apply.~~

~~(c) The external thermal oxidizer shall be operated at or above 1,150 Fahrenheit or a temperature determined during compliance tests to maintain a minimum 91.1% overall efficiency.~~

~~(d) The VOC content of electrically insulating varnishes or enamel applied to aluminum or copper wire for use in electrical machinery shall not exceed 5.85 pounds VOC per gallon of coating less water. This is equivalent to a VOC content of 1.7 pounds VOC per gallon of coating less water after the effect of the internal catalytic oxidizers.~~

Pursuant to CP 003-8609-00013, issued October 17, 1997 and 326 IAC 8-1-2(a), the Permittee shall operate the external thermal oxidizer to achieve compliance with Conditions D.3.1 and D.3.2.

~~D.3.5 Volatile Organic Compounds (VOC)~~

~~Compliance with the VOC content limitations contained in Conditions D.3.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer and the overall efficiency of the thermal oxidizer.~~

~~D.3.6 VOC Emissions~~

~~Compliance with Condition D.3.2 shall be demonstrated within 30 days of the end of each month based on the total volatile organic compound usage for the twelve (12) month period.~~

D.3.~~7~~**5** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.3.1 and D.3.2, within fifty (50) months after issuance of this permit, the Permittee shall ~~perform VOC testing utilizing~~

~~methods as~~ **conduct performance tests to verify VOC control efficiency as per Conditions D.3.1 for thermal oxidizers using methods** approved by the Commissioner.

(b) ~~Additionally, if a coating issued with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1150EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 91.1% overall control efficiency.~~ **Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.3.1 for thermal oxidizers using methods approved by the Commissioner.**

D.3.6 VOC Emissions

Compliance with Condition D.3.2 shall be demonstrated within 30 days of the end of each month. This shall be based on the total volatile organic compound emitted for the previous month, and adding it to previous 11 months total VOC emitted so as to arrive at VOC emission for 12 consecutive months period. The VOC emissions for a month can be arrived at using the following equation for VOC usage:

VOC emitted = [(VOC input) x (100 - %control efficiency)] + [uncontrolled VOC input]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

~~D.3.8 Monitoring~~

~~(a) Compliance with the 1150EF minimum temperature will be monitored by computer collected data generated continuously.~~

~~(b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour average temperature records will be made available within five business days from request.~~

~~(c) The temperatures will be reported based on an eight-hour average.~~

~~(d) The oxidizer shall operate with a five (5) degree buffer such that if the eight hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour average temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.~~

~~(e) If a one-hour average temperature is less than the established minimum temperature, this will be considered noncompliance.~~

D.3.7 Thermal Oxidizer

(a) From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature of 621 degrees Celsius.

(b) The Permittee shall determine the temperature and fan amperage, or duct pressure, from the most recent valid stack test that demonstrates compliance with limits in Conditions D.3.1 and D.3.2, as approved by IDEM.

(c) From the date of the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature and fan amperage, or duct pressure, as observed during the compliant stack test.

D.3.8 Parametric Monitoring

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as indicated by the manufacturer or as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.9 Record Keeping Requirements

(a) To document compliance with Conditions D.3.1 and D.3.2, the Permittee shall maintain records in accordance with (1) through (~~4~~ **5**) below. Records maintained for (1) through (~~4~~ **5**) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limits and/or the VOC emission limits established in Conditions D.3.1 and D.3.2.

(1) The ~~amount and~~ VOC content of each coating material and solvent used **less water**.

(2) The amount of coating material and solvent used on a monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

~~(2) A log of the dates of use;~~

(3) The monthly cleanup solvent usage.

(~~3~~**4**) The total VOC usage for each month. ~~and~~

(~~4~~**5**) **The VOC emitted based on: VOC delivered to the applicators x (1 - % destruction efficiency/100) + VOC in cleaning solvent.** ~~The weight of VOCs emitted for each compliance period~~

(b) To document compliance with Condition D.3.8, the Permittee shall maintain**:** ~~records of the computer collected data.~~

(1) Continuous temperature records (on an hourly average basis) for the thermal oxidizer and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.

(2) Daily records of the duct pressure or fan amperage.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.10 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.3.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.4

D.4.1 Volatile Organic Compounds [326 IAC 8-2-8]

(a) Pursuant to 326 IAC 8-2-8 (Magnet Wire Coating Operations), the CP **0**03-6199-00013 issued on February 11, 1997, the ~~volatile organic content less water of electrically insulating varnishes or enamel applied to aluminum or copper wire for use in electrical machinery shall be limited to~~ **owner or operator shall not allow the discharge into the atmosphere of VOC in excess of** 1.7 pounds VOC per gallon of coating ~~less water~~**, excluding water, as** delivered to the applicator ~~determined after use of the thermal oxidizer.~~

~~(b) The limit includes the evaporation of thinners being added to coatings to adjust viscosity, therefore, it is necessary to keep coating and solvent containers covered at all times to prevent solvent evaporation.~~

(b) The equivalent pounds of VOC per gallon of coating solids (as applied) shall be limited to less than 2.21, when L is equal to 1.7 pounds of VOC per gallon of coating and D is equal to 7.36 pounds of VOC per gallon of coating.

(c) Pursuant to 326 IAC 8-1-2 (b), the enameling ovens' VOC emission shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon coating solids, allowed in (a).

This equivalency was determined by the following equation:

$$E = L / (1 - (L/D))$$

Where

L= Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating
D= Density of VOC in coating in pounds per gallon of VOC
E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied

Actual solvent density shall be used to determine compliance of surface coating operation using the compliance methods in 326 IAC 8-1-2 (a).

(d) Pursuant to 326 IAC 8-1-2(c), the equivalent overall control efficiency of the thermal oxidizers shall be no less than 96.7% calculated by the following equation:

$$O = \frac{V - E}{V} \times 100$$

Where:

V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied.

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

O = Equivalent overall control efficiency of the capture system and control device as a percentage.

D.4.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for ~~this facility~~ **these facilities** and ~~its~~ **their** control device**s**.

Compliance Determination Requirements

D.4.3 Volatile Organic Compounds (VOC) **[326 IAC 8-1-2]**

~~(a) Pursuant to the Construction Permit issued on February 11, 1997 (CP 003-6199-00013), the internal thermal oxidizer associated with ovens 695, 690, 605, and 600 shall operate with an overall efficiency of not less then 96.7% at all times when the wire enameling oven is in operation.~~

~~(b) The 96.7% overall efficiency is necessary to ensure compliance with 326 IAC 8-2-8.~~

~~(c) The internal thermal oxidizer shall be operated at or above 1,400 degrees Fahrenheit or a temperature determined during compliance tests to maintain a minimum 96.7% overall efficiency.~~

Pursuant to CP 003-8609-00013, issued October 17, 1997 and 326 IAC 8-1-2(a), the Permittee shall operate the internal thermal oxidizers to achieve compliance with Condition D.4.1.

~~D.4.4 Volatile Organic Compounds (VOC)~~

~~Compliance with the VOC content limitations contained in Conditions D.4.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer and the overall efficiency of the thermal oxidizer.~~

D.4.~~5~~**4** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.4.1, within fifty (50) months after issuance of this permit, the Permittee shall ~~perform VOC testing utilizing methods as~~ **conduct performance tests to verify VOC control efficiency as per Condition D.4.1 for thermal oxidizer using methods** approved by the Commissioner.

(b) One representative oven from the four (4) SICME ES enamel ovens shall be tested. The oven tested shall **be the oven in which the longest amount of time has elapsed since its previous test.** ~~not be an oven that has previously been tested~~ **This test shall be repeated at least once every five years from the date of this valid compliance demonstration.**

~~(c) Additionally, if a coating issued with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1,400EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 96.7% overall control efficiency.~~ **Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control**

efficiency as per Condition D.4.1 for thermal oxidizers using methods approved by the Commissioner.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

~~D.4.6 Monitoring~~

~~(a) Compliance with the 1,400EF minimum temperature will be monitored by computer collected data generated continuously.~~

~~(b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour average temperature records will be made available within five business days from request.~~

~~(c) The temperatures will be reported based on an eight-hour average.~~

~~(d) The oxidizer shall operate with a five (5) degree buffer such that if the eight hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour average temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.~~

~~(e) If one-hour average temperature is less than the established minimum temperature, this will be considered noncompliance.~~

D.4.5 Thermal Oxidizer

(a) From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizers at or above the hourly average temperature of 760 degrees Celsius.

(b) The Permittee shall determine the temperature and fan amperage, or duct pressure, from the most recent valid stack test that demonstrates compliance with limits in Condition D.4.1, as approved by IDEM.

(c) From the date of the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature and fan amperage, or duct pressure, as observed during the compliant stack test.

D.4.6 Parametric Monitoring

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as indicated by the manufacturer or as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.4.7 Record Keeping Requirements

~~(a) To document compliance with Condition D.4.1, the Permittee shall maintain records of material safety data sheets (MSDS), or equivalent, to verify the VOC content of each coating material and solvent used.~~

(a) To document compliance with Condition D.4.1, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limits and/or the VOC emission limits established in Conditions D.4.1

(1) The VOC content of each coating material and solvent used less water.

(2) The amount of coating material and solvent used on a monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) The monthly cleanup solvent usage.

(4) The total VOC usage for each month.

(5) The VOC emitted (in tons per year) based on: VOC delivered x (1 - % destruction efficiency/100) + VOC in cleaning solvent.

(b) To document compliance with Condition D.4.6, the Permittee shall maintain**:** ~~records of the computer collected data.~~

(1) Continuous temperature records (on an hourly average basis) for the thermal oxidizer and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.

(2) Daily records of the duct pressure or fan amperage.

(c) All records shall be maintained in accordance with Section C- General Record Keeping Requirements, of this permit.

SECTION D.5

D.5.1 Volatile Organic Compound (VOC)

(a) Pursuant to 326 IAC 8-6 (Organic Solvent Emission Limitations), the VOC emitted from the ~~source~~ **six (6) Square/Rectangular wire enameling ovens, emission units 610, 640, 620 670, 680 and 660** shall be reduced by at least **eighty-five percent (**85%**).** ~~from emissions which would occur before the application of any control equipment or process.~~

~~(b) The six (6) Square/Rectangular wire enameling ovens, emission units 610, 640, 620 670, 680 and 660 were constructed prior to 1980, therefore, there are no other applicable VOC requirements for these emission units.~~

(~~c~~**b**) Any change or modification which may increase potential emissions from the six (6) Square/Rectangular wire enameling ovens shall require prior approval from the OAQ before such change may occur.

D.5.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for ~~this facility~~ **these facilities** and ~~its~~ **their** control device**s**.

Compliance Determination Requirements

D.5.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

Pursuant to 326 IAC 8-1-2(a), the Permittee shall operate the thermal oxidizers to achieve compliance with Condition D.5.1.

D.5.3**4** ~~Volatile Organic Compound (VOC)~~**Thermal Oxidizer Operation**

(a) ~~To ensure compliance with Condition D.5.1, the external thermal oxidizers associated with these facilities shall operate with an overall efficiency of not less than 85% at all times when the facilities are in operation.~~ **shall operate at all times that the six (6) square/rectangular ovens are in operation. When operating, the external thermal oxidizers shall maintain a minimum operating temperature of 593 degrees Celsius or a temperature and fan amperage, or duct pressure, determined in the compliance testing to maintain a volatile organic compound (VOC) overall control efficiency of not less than eighty-five percent (85%).**

(b) ~~The external thermal oxidizers shall be operated at or above 1100EF or a temperature determined during compliance tests to maintain a minimum 85% overall efficiency.~~

~~**Compliance Determination Requirements**~~

D.5.~~4~~**5** Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.5.1, within sixty (60) days after issuance of this permit, the Permittee shall ~~perform VOC testing utilizing methods as~~ **conduct performance tests to verify VOC control efficiency as per Condition D.5.3 for thermal oxidizer using methods** approved by the Commissioner.

(b) One representative oven from the six (6) Square/Rectanglar enamel ovens shall be tested. The oven tested shall **be the oven in which the longest amount of time has elapsed since its previous test.** ~~not be an oven that has previously been tested~~ **This test shall be repeated at least once every five years from the date of this valid compliance demonstration.**

(c) ~~Additionally, if a coating is used with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1100EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 85% overall control efficiency.~~ **Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.5.3 for thermal oxidizers using methods approved by the Commissioner.**

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

~~D.5.5 Monitoring~~

~~(a) Compliance with the 1100EF minimum temperature will be monitored by computer collected data generated continuously.~~

~~(b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour average temperature records will be made available within five business days from request.~~

~~(c) The temperature will be reported based on an eight-hour average.~~

~~(d) The oxidizer shall operate with a five (5) degree buffer such that if the eight hour average temperature falls within five (5) degree of the minimum required temperature, corrective action shall be performed and one-hour average temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.~~

~~(e) If a one-hour average temperature is less than the established minimum temperature, this will be considered noncompliance.~~

D.5.6 Thermal Oxidizer

(a) From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature of 593 degrees Celsius.

(b) The Permittee shall determine the temperature and fan amperage, or duct pressure, from the most recent valid stack test that demonstrates compliance with limits in Condition D.5.1 as approved by IDEM.

(c) From the date of the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature and fan amperage, or duct pressure, as observed during the compliant stack test.

D.5.7 Parametric Monitoring

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizers for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizers are in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as indicated by the manufacturer or as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.5.~~6~~**8** Record Keeping Requirements

(a) To document compliance with **Conditions D.5.1 and** D.5.~~5~~ **7**, the Permittee shall maintain**:** ~~records of the computer collected data.~~

(1) Records of the VOC emitted based on: VOC delivered to the applicators x (1 - % destruction efficiency/100) + VOC in cleaning solvent.

(2) Continuous temperature records (on an hourly average basis) for the

thermal oxidizer and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.

(3) Daily records of the duct pressure or fan amperage.

(b) All records shall be maintained in accordance with Section C- General Record Keeping Requirements of this permit.

SECTION D.6

D.6.1 Volatile Organic Compound (VOC)

(a) Pursuant to 326 IAC 8-6 (Organic Solvent Emission Limitations), the VOC emitted from the **twelve (12) MOCO wire enameling ovens, emission units 351-352, 353-354, 355-356, 367-368, 365-366, 363-364, 373-374, 371-372, 369-370, 357-358, 359-360, and 361-362** ~~source~~ shall be reduced by at least **eighty-five percent (**85%**).** ~~from emissions which would occur before the application of any control equipment or process.~~

~~(b) The twelve (12) MOCO wire enameling ovens, emission units 351-352, 353-354, 355-356, 367-368, 365-366, 363-364, 373-374, 371-372, 369-370, 357-358, 359-360, and 361-362 were constructed prior to 1980, therefore, there are no other applicable VOC requirements for these emission units.~~

(~~c~~**b**) Any change or modification which may increase potential emissions from the twelve (12) MOCO wire enameling ovens shall require prior approval from the OAQ before such change may occur.

D.6.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for ~~this facility~~ **these facilities** and ~~its~~ **their** control device**s**.

Compliance Determination Requirements

D.6.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

Pursuant to 326 IAC 8-1-2(a), the Permittee shall operate the thermal oxidizers to achieve compliance with Condition D.6.1.

D.6.4 Thermal Oxidizer

In order to satisfy the requirements of 326 IAC 8-6 and Condition D.6.1, the external thermal oxidizers must operate such that the overall control efficiency is at least eighty-five percent (85%).

~~D.6.3 Volatile Organic Compound (VOC)~~

~~(a) To ensure compliance with Condition D.6.1, the external thermal oxidizers associated with these facilities shall operate with an overall efficiency of not less than 85% at all times when the facilities are in operation.~~

~~(b) The external thermal oxidizers shall be operated at or above 1100EF a temperature determined during compliance tests to maintain a minimum 85% overall efficiency.~~

D.6.~~4~~**5** Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.6.1, within sixty (60) days after issuance of this permit, the Permittee shall ~~perform VOC testing utilizing methods as~~ **conduct performance tests to verify VOC control efficiency as per Condition D.6.3 for thermal oxidizer using methods** approved by the Commissioner.

(b) One representative oven from the twelve (12) MOCO enamel ovens shall be tested.

The oven tested shall **be the oven in which the longest amount of time has elapsed since its previous test.** ~~not be an oven that has previously been tested~~ **This test shall be repeated at least once every five years from the date of this valid compliance demonstration.**

(c) ~~Additionally, if a coating issued with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1100EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 85% overall control efficiency.~~ **Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.6.3 for thermal oxidizers using methods approved by the Commissioner.**

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

~~D.6.5 Monitoring~~

~~(a) Compliance with the 1100EF minimum temperature will be monitored by computer collected data generated continuously.~~

~~(b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour average temperature records will be made available within five business days from request.~~

~~(c) The temperature will be reported based on an eight-hour average.~~

~~(d) The oxidizer shall operate with a five (5) degree buffer such that if the eight hour average temperature falls within five (5) degree of the minimum required temperature, corrective action shall be performed and one-hour average temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.~~

~~(e) If a one-hour average temperature is less than the established minimum temperature, this will be considered noncompliance.~~

D.6.7 Thermal Oxidizer

(a) From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizers at or above the hourly average temperature of 593 degrees Celsius.

(b) The Permittee shall determine the temperature and fan amperage, or duct pressure, from the most recent valid stack test that demonstrates compliance with limits in Condition D.6.1, as approved by IDEM.

(c) From the date of the approved stack test results are available, the Permittee shall operate the thermal oxidizers at or above the hourly average temperature and fan amperage, or duct pressure, as observed during the compliant stack test.

D.6.6 Parametric Monitoring

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizers for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizers are in operation. When for any one reading, the duct pressure or fan amperage is outside the normal range as indicated by the manufacturer or as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.6.~~6~~**7** Record Keeping Requirements

(a) To document compliance with Conditions **D.6.1 and** D.6.~~5~~**6**, the Permittee shall maintain**:** ~~records of the computer collected data.~~

(1) Records of the VOC emitted based on: VOC delivered to the applicators x (1 - % destruction efficiency/100) + VOC in cleaning solvent.

(2) Continuous temperature records (on an hourly average basis) for the thermal oxidizer and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.

(3) Daily records of the duct pressure or fan amperage.

(b) All records shall be maintained in accordance with Section C- General Record Keeping Requirements of this permit.

SECTION D.7

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.7.1 Volatile Organic Compounds [326 IAC 8-2-8]

(a) Pursuant to 326 IAC 8-2-8 (Magnet Wire Coating Operations) and CP ~~113~~ **003**-3268-00013 issued on February 2, 1994, the ~~volatile organic content less water of electrically insulating varnishes or enamel applied to aluminum or copper wire for use in electrical machinery shall be limited to~~ **owner or operator shall not allow the discharge into the atmosphere of VOC in excess of** 1.7 pounds VOC per gallon of coating ~~less water~~**, excluding water, as** delivered to the applicator ~~determined after use of the thermal oxidizer.~~

~~(b) The limit includes the evaporation of thinners being added to coatings to adjust viscosity, therefore, it is necessary to keep coating and solvent containers covered at all times to prevent solvent evaporation.~~

(b) The equivalent pounds of VOC per gallon of coating solids (as applied) shall be limited to less than 2.21, when L is equal to 1.7 pounds of VOC per gallon of coating and D is equal to 7.36 pounds of VOC per gallon of coating.

(c) Pursuant to 326 IAC 8-1-2 (b), the enameling oven's VOC emission shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon coating solids, allowed in (a).

This equivalency was determined by the following equation:

E = L / (1 - (L/D))

Where

L= Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating
D= Density of VOC in coating in pounds per gallon of VOC
E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied

Actual solvent density shall be used to determine compliance of surface coating operation using the compliance methods in 326 IAC 8-1-2 (a).

(d) Pursuant to 326 IAC 8-1-2(c), the equivalent overall control efficiency of the thermal oxidizer shall be no less than 94.8% calculated by the following equation:

$$O = \frac{V - E}{V} \times 100$$

Where:

V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied.
E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.
O = Equivalent overall control efficiency of the capture system and control device as a percentage.

D.7.2 Volatile Organic Compounds

Pursuant to the Registration issued on February 2, 1994, (CP-003-3268-0013), the emissions of VOC from the three (3) ovens are limited to a total of 25 tons per year or less.

D.7.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for ~~this facility~~ **these facilities** and ~~its~~ **their** control device**s**.

Compliance Determination Requirements

D.7.4 Volatile Organic Compounds (VOC) **[326 IAC 8-1-2]**

~~(a) Pursuant to the Registration issued on February 2, 1994 (CP-003-3268-0013), the integral internal catalytic oxidizers associated with the pilot ovens shall operate with an overall efficiency of not less then 94.8% at all times when the wire enameling oven is in operation.~~

~~(b) The 94% overall efficiency is necessary to ensure compliance with 326 IAC 8-2-8 and Condition D.7.2.~~

~~(c) The integral internal catalytic oxidizers shall be operated at or above 1,076 Fahrenheit or a temperature determined during compliance tests to maintain a minimum 94% overall efficiency.~~

~~(d) The VOC content of electrically insulating varnishes or enamel applied to aluminum or copper wire for use in electrical machinery shall not exceed 7.00 pounds VOC per gallon of coating less water. This is equivalent to a VOC content of 1.7 pounds VOC per gallon~~

~~of coating less water after the effect of the internal catalytic oxidizers.~~

Pursuant to CP 003-3268-00013, issued on February 2, 1994 and 326 IAC 8-1-2(a), the Permittee shall operate the internal catalytic oxidizers to achieve compliance with Conditions D.7.1 and D.7.2.

~~D.7.5 Volatile Organic Compounds (VOC)~~

~~Compliance with the VOC content limitations contained in Conditions D.7.1 and D.7.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer and the overall efficiency of the catalytic oxidizer.~~

D.7.~~6~~**5** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.7.1, within twenty-four (24) months after issuance of this permit, the Permittee shall ~~perform VOC testing utilizing methods as~~ **conduct performance tests to verify VOC control efficiency as per Condition D.7.1 for catalytic oxidizers using methods** approved by the Commissioner. **Testing shall also be conducted every twenty-four (24) months after this first test.**

(b) One representative ~~oven~~ **catalytic oxidizer** from the three (3) wire enameling pilot ovens shall be tested. The ~~oven~~ **catalytic oxidizer** tested shall ~~not be an oven that has previously been tested~~ **be the oven with the oldest catalyst life that has not been tested since the issuance of this permit. Oldest catalyst refers to the longest serving catalyst since last activation.** ~~The catalyst of the oven chosen to be tested shall be on its second year of life. The test shall be done within the last 2 months of this second year of life of the catalyst.~~

(c) Within twenty-four (24) months of issuance of this permit and every twenty-four (24) months thereafter, the Permittee shall remove the catalyst from each oven and have the catalyst vendor conduct a catalyst activity analysis. Catalysts with percent activity less than the catalyst activity of the oldest catalyst must be replaced or a stack test must be conducted to show that a 94.8% overall control efficiency is being achieved.

(~~c~~ **d**) ~~Additionally, if a coating issued with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1,076EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 94% overall control efficiency.~~ **Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.7.4 for catalytic oxidizers using methods approved by the Commissioner.**

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

~~D.7.7 Monitoring~~

~~(a) Compliance with the 1,076EF minimum temperature will be monitored by computer collected data generated continuously.~~

~~(b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour average temperature records will be made available within five business days from request.~~

~~(c) The temperatures will be reported based on an eight-hour average.~~

~~(d) The oxidizers shall operate with a five (5) degree buffer such that if the eight hour~~

~~average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour average temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.~~

~~(e) If a one-hour average temperature is less than the established minimum temperature, this will be considered noncompliance.~~

D.7.6 Catalytic Oxidizer

(a) From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the catalytic oxidizer at or above the hourly average temperature of 580 degrees Celsius.

(b) The Permittee shall determine the temperature from the most recent valid stack test that demonstrates compliance with limits in Conditions D.7.1 and D.7.2, as approved by IDEM.

(c) From the date of the approved stack test results are available, the Permittee shall operate the catalytic oxidizers at or above the hourly average temperature as observed during the compliant stack test.

D.7.7 Parametric Monitoring

A continuous monitoring system shall be calibrated, maintained, and operated on the catalytic oxidizers for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

D.7.8 Catalyst Replacement

The catalysts shall be replaced a minimum of every twenty-four (24) months provided that the catalytic oxidizers are achieving the required overall **control** efficiency. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.7.9 Record Keeping Requirements

(a) To document compliance with Condition**s** D.7.1 **and D.7.2**, the Permittee shall maintain records ~~of material safety data sheets (MSDS), or equivalent, to verify the VOC content of each coating material and solvent used.~~ **in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limits and/or the VOC emission limits established in Conditions D.7.1 and D.7.2.**

(1) The VOC content of each coating material and solvent used less water.

(2) The amount of coating material and solvent used on a monthly basis.

(a) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(b) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) The monthly cleanup solvent usage.

(4) The total VOC usage for each month.

(5) The VOC emitted based on: VOC delivered to the applicators x (1 - % destruction efficiency/100) + VOC in cleaning solvent.

(b) To document compliance with Condition D.7.7, the Permittee shall maintain records of **continuous temperature records (on an hourly average basis) for the catalytic oxidizer and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.**

(c) To document compliance with Condition D.7.8, the Permittee shall maintain records of the catalyst replacement.

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.8

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.8.1 Volatile Organic Compounds [326 IAC 8-2-8]

(a) Pursuant to 326 IAC 8-2-8 (Magnet Wire Coating Operations) and CP 003-8609-00013 issued on October 17, 1997, the ~~volatile organic content less water of electrically insulating varnishes or enamel applied to aluminum or copper wire for use in electrical machinery shall be limited to~~ **owner or operator shall not allow the discharge into the atmosphere of VOC in excess of** 1.7 pounds VOC per gallon of coating ~~less water~~**, excluding water, as** delivered to the applicator ~~determined after use of the thermal oxidizer.~~

~~(b) The limit includes the evaporation of thinners being added to coatings to adjust viscosity, therefore, it is necessary to keep coating and solvent containers covered at all times to prevent solvent evaporation.~~

(b) The equivalent pounds of VOC per gallon of coating solids (as applied) shall be limited to less than 2.21, when L is equal to 1.7 pounds of VOC per gallon of coating and D is equal to 7.36 pounds of VOC per gallon of coating.

(c) Pursuant to 326 IAC 8-1-2 (b), the enameling oven's VOC emission shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon coating solids, allowed in (a).

This equivalency was determined by the following equation:

E = L / (1 - (L/D))

Where

L= Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating
D= Density of VOC in coating in pounds per gallon of VOC
E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied

Actual solvent density shall be used to determine compliance of surface coating operation using the compliance methods in 326 IAC 8-1-2 (a).

(d) Pursuant to 326 IAC 8-1-2(c), the equivalent overall control efficiency of the thermal oxidizer shall be no less than 92.3% calculated by the following equation:

$$O = \frac{V - E}{V} \times 100$$

Where:

V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied.

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

O = Equivalent overall control efficiency of the capture system and control device as a percentage.

D.8.2 PSD Limit [326 IAC 2-2] [40 CFR 52.21]

Pursuant to CP 003-8609-00013 issued on October 17, 1997, the VOC emissions from the Quartz Fabric oven (emission unit 811)(Section D.3), the two (2) MAG VZ6 ovens (Section D.8), and the applicator cleaning area (Section D.~~12~~**10**) shall be limited to less than 40 tons per twelve (12) consecutive months of VOC. An increase in total VOC emissions from these equipment above 40 tons per year shall require a PSD permit pursuant to 326 IAC 2-2 and 40 CFR 52.21 before such change may occur.

D.8.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for ~~this facility~~ **these facilities** and ~~its~~ **their** control device**s**.

Compliance Determination Requirements

D.8.4 Volatile Organic Compounds (VOC) **[326 IAC 8-1-2]**

~~(a) Pursuant to the Construction Permit issued on October 17, 1997 (CP 003-8609-00013), the integral internal catalytic oxidizers associated with the pilot ovens shall operate with an overall efficiency of not less then 92.3% at all times when the wire enameling oven is in operation.~~

~~(b) The 92.3% overall efficiency is necessary to ensure compliance with 326 IAC 8-2-8 and to ensure 326 IAC 2-2 does not apply.~~

~~(c) The integral internal catalytic oxidizers shall be operated at or above 1,250 Fahrenheit or a temperature determined during compliance tests to maintain a minimum 92.3% overall efficiency.~~

~~(d) The VOC content of electrically insulating varnishes or enamel applied to aluminum or copper wire of use in electrical machinery shall not exceed 6.12 pounds VOC per gallon of coating less water. This is equivalent to a VOC content of 1.7 pounds VOC per gallon of coating less water after the effect of the internal catalytic oxidizers.~~

Pursuant to CP 003-8609-00013, issued October 17, 1997 and 326 IAC 8-1-2(a), the Permittee shall operate the internal catalytic oxidizers to achieve compliance with Conditions D.8.1 and D.8.2.

~~D.8.5 Volatile Organic Compounds (VOC)~~

~~Compliance with the VOC content and usage limitations contained in Conditions D.8.1 and D.8.2~~

~~shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer and the overall efficiencies of the catalytic oxidizers.~~

~~D.8.6 VOC Emissions~~

~~Compliance with the Condition D.8.2 shall be demonstrated within 30 days of the end of each month based on the total volatile organic compound usage for the twelve (12) month period.~~

D.8.~~7~~**5** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.8.1 and D.8.2, within twenty-four (24) months after issuance of this permit, the Permittee shall ~~perform VOC testing utilizing methods as~~ **conduct performance tests to verify VOC control efficiency as per Condition D.8.1 for catalytic oxidizers using methods** approved by the Commissioner. **Testing shall also be conducted every twenty-four (24) months after this first test.**

(b) One representative ~~oven~~ **catalytic oxidizer** from the two (2) wire enameling ovens shall be tested. The ~~oven~~ **catalytic oxidizer** tested shall ~~not be an oven that has previously been tested~~ **be the oven with the oldest catalyst life that has not been tested since the issuance of this permit. Oldest catalyst refers to the longest serving catalyst since last activation.** ~~The catalyst of the oven chosen to be tested shall be on its second year of life. The test shall be done within the last 2 months of this second year of life of the catalyst.~~

(c) Within twenty-four (24) months of issuance of this permit and every twenty-four (24) months thereafter, the Permittee shall remove the catalyst from each oven and have the catalyst vendor conduct a catalyst activity analysis. Catalysts with percent activity less than the catalyst activity of the oldest catalyst must be replaced or a stack test must be conducted to show that a 92.3% overall control efficiency is being achieved.

(~~c~~ **d**) ~~Additionally, if a coating issued with a VOC content higher than what was being used during the stack test required in (a) above or if the temperature falls below the 1,250EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 92.3% overall control efficiency.~~ **Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.8.1 for catalytic oxidizers using methods approved by the Commissioner.**

D.8.6 VOC Emissions

Compliance with Condition D.8.2 shall be demonstrated within 30 days of the end of each month. This shall be based on the total volatile organic compound emitted for the previous month, and adding it to previous 11 months total VOC emitted so as to arrive at VOC emission for 12 consecutive months period. The VOC emissions for a month can be arrived at using the following equation for VOC usage:

VOC emitted = [(VOC input) x (100 - %control efficiency)] + [uncontrolled VOC input]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

~~D.8.8 Monitoring~~

~~(a) Compliance with the 1,250EF minimum temperature will be monitored by computer collected data generated continuously.~~

~~(b) Eight-hour average temperatures will be made available to IDEM upon request and one-~~

~~hour average temperature records will be made available within five business days from request.~~

~~(c) The temperatures will be reported based on an eight-hour average.~~

~~(d) The oxidizers shall operate with a five (5) degree buffer such that if the eight hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour average temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.~~

~~(e) If a one-hour average temperature is less than the established minimum temperature, this will be considered noncompliance.~~

D.8.7 Catalytic Oxidizer

(a) From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the catalytic oxidizers at or above the hourly average temperature of 677 degrees Celsius.

(b) The Permittee shall determine the temperature from the most recent valid stack test that demonstrates compliance with limits in Conditions D.8.1 and D.8.2, as approved by IDEM.

(c) From the date of the approved stack test results are available, the Permittee shall operate the catalytic oxidizers at or above the hourly average temperature as observed during the compliant stack test.

D.8.8 Parametric Monitoring

A continuous monitoring system shall be calibrated, maintained, and operated on the catalytic oxidizers for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

D.8.9 Catalyst Replacement

The catalysts shall be replaced a minimum of every twenty-four (24) months provided that the catalytic oxidizer is achieving the required overall **control** efficiency. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.8.10 Record Keeping Requirements

(a) To document compliance with Conditions D.8.1 and D.8.2, the Permittee shall maintain records in accordance with (1) through (~~4~~**6**) below. Records maintained for (1) through (~~4~~**6**) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limits and/or the VOC emission limits established in Conditions D.8.1 and D.8.2.

(1) The ~~amount and~~ VOC content of each coating material and solvent used **less water**.

(2) The amount of coating material and solvent used on a monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

~~(2) A log of the dates of use;~~

(3) The monthly cleanup solvent usage.

(~~3~~**4**) The total VOC usage for each month. ~~and~~

(~~4~~**5**) **The VOC emitted based on: VOC delivered to the applicators x (1 - % destruction efficiency/100) + VOC in cleaning solvent.** ~~The weight of VOCs emitted for each compliance period~~

(b) To document compliance with Condition D.8.8, the Permittee shall maintain **continuous temperature records (on an hourly average basis) for the thermal oxidizer and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.** ~~records of the computer collected data.~~

(c) To document compliance with Condition D.8.9, the Permittee shall maintain records of the catalyst replacement.

(d) All records shall be maintained in accordance with Section C- General Record Keeping Requirements, of this permit.

D.8.11 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.8.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.9

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.9.1 Volatile Organic Compounds [326 IAC 8-2-8] [326 IAC 2-2] [40 CFR 52.21]

(a) Pursuant to 326 IAC 8-2-8 (Magnet Wire Coating Operations), the ~~volatile organic content less water of electrically insulating varnishes or enamel applied to aluminum or copper wire for use in electrical machinery shall be limited to~~ **owner or operator shall not allow the discharge into the atmosphere of VOC in excess of** 1.7 pounds VOC per gallon of coating ~~less water~~**, excluding water, as** delivered to the applicator ~~determined after use of the thermal oxidizer.~~

~~(b) The limit includes the evaporation of thinners being added to coatings to adjust viscosity, therefore, it is necessary to keep coating and solvent containers covered at all times to prevent solvent evaporation.~~

(b) The equivalent pounds of VOC per gallon of coating solids (as applied) shall be limited to less than 2.21, when L is equal to 1.7 pounds of VOC per gallon of coating and D is equal to 7.36 pounds of VOC per gallon of coating.

(c) Pursuant to 326 IAC 8-1-2 (b), the enameling oven's VOC emission shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon coating solids, allowed in (a).

This equivalency was determined by the following equation:

E = L / (1 - (L/D))

Where

L= Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating
D= Density of VOC in coating in pounds per gallon of VOC
E= Equivalent emission limit in pounds of VOC per gallon of coating solids as applied

Actual solvent density shall be used to determine compliance of surface coating operation using the compliance methods in 326 IAC 8-1-2 (a).

(~~c~~**d) Pursuant to 326 IAC 8-1-2(c), the equivalent overall control efficiency of the thermal oxidizer shall be no less than 92.3% calculated by the following equation:**

$$O = \frac{V - E}{V} \times 100$$

Where:

V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in 326 IAC 8-1-4 in units of pounds of VOC per gallon of coating solids as applied.
E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.
O = Equivalent overall control efficiency of the capture system and control device as a percentage.

(**e**) The potential to emit of VOC is less than the significant level under prevention of significant deterioration (PSD) of 40 tons per year. Therefore, a PSD review was not required when this oven was originally permitted. However, any change or modification the would increase VOC emissions above 40 tons per year shall require a PSD permit pursuant to 326 IAC 2-2 and 40 CFR 52.21 before such change can occur.

D.9.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for ~~this facility~~ **these facilities** and ~~its~~ **their** control device**s**.

Compliance Determination Requirements

D.9.3 Volatile Organic Compounds (VOC) **[326 IAC 8-1-2]**

~~(a) The integral catalytic oxidizers associated with MAG-VZ/5 shall operate with an overall efficiency of not less than 92.3% at all times when the wire MAG-VZ/5 is in operation.~~

~~(b) The 92.3% overall efficiency for each oven is necessary to ensure compliance with 326 IAC 8-2-8 and that 326 IAC 2-2 and 40 CFR 52.21 do not apply.~~

~~(c) The integral catalytic oxidizer shall be operated at or above 932EF or a temperature determined during compliance tests to maintain a minimum 92.3% overall efficiency.~~

~~(d) The basecoat VOC content of electrically insulating varnishes or enamel applied to aluminum or copper wire for use in electrical machinery shall not exceed 5.4 pounds VOC per gallon of coating less water. This is equivalent to a VOC content of 1.7 pounds~~

~~VOC per gallon of coating less water after the effect of the internal catalytic oxidizers.~~

~~(e) The topcoat VOC content of electrically insulating varnishes or enamel applied to aluminum or copper wire for use in electrical machinery shall not exceed 6.1 pounds VOC per gallon of coating less water. This is equivalent to a VOC content of 1.7 pounds VOC per gallon of coating less water after the effect of the internal catalytic oxidizers.~~

Pursuant to 326 IAC 8-1-2(a), the Permittee shall operate the catalytic oxidizers to achieve compliance with Condition D.9.1.

~~D.9.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-2] [326 IAC 8-1-4]~~

~~Compliance with the VOC content limitations contained in Conditions D.9.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer and the overall efficiencies of the catalytic oxidizers.~~

D.9.~~5~~**4** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.9.1, ~~within 60 days after achieving maximum rate, but not less than 180 days after initial start-up~~, **within twenty-four (24) months after issuance of this permit,** the Permittee shall ~~perform VOC testing utilizing methods as~~ **conduct performance tests to verify VOC control efficiency as per Condition D.9.1 for catalytic oxidizers using methods** approved by the Commissioner. **Testing shall also be conducted every twenty-four (24) months after this first test.**

(b) ~~Additionally, if a coating is used with a VOC content higher than what was used during the stack test required in (a) above or if the temperature falls below the 932EF required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 92.3% overall efficiency.~~ **One representative catalytic oxidizer shall be tested. The oven tested shall be the oven with the oldest catalyst life that has not been tested since the issuance of this permit. Oldest catalyst refers to the longest serving catalyst since last activation.**

(c) Within twenty-four (24) months of issuance of this permit and every twenty-four (24) months thereafter, the Permittee shall remove the catalyst from each oven and have the catalyst vendor conduct a catalyst activity analysis. Catalysts with percent activity less than the catalyst activity of the oldest catalyst must be replaced or a stack test must be conducted to show that a 92.3% overall control efficiency is being achieved.

(d) Before using a coating with a higher VOC content than what was used during the stack test required in (a) above, the Permittee shall conduct a performance test to verify VOC control efficiency as per Condition D.9.1 for catalytic oxidizers using methods approved by the Commissioner.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

~~D.9.6 Monitoring~~

~~(a) Compliance with the 932EF minimum temperature will be monitored by computer collected data generated continuously.~~

~~(b) Eight-hour average temperatures will be made available to IDEM upon request and one-hour average temperature records will be made available within five business days from request.~~

~~(c) The temperatures will be reported based on an eight-hour average.~~

~~(d) The MAG-VZ/5 shall operate with a five (5) degree buffer such that if the eight-hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour average temperatures shall be investigated to determine if any temperature feel below the actual minimum temperature.~~

~~(e) If a one-hour average temperature is less than the established minimum temperature, this will be considered noncompliance.~~

D.9.5 Catalytic Oxidizer

(a) From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the catalytic oxidizer at or above the hourly average temperature of 500 degrees Celsius.

(b) The Permittee shall determine the temperature from the most recent valid stack test that demonstrates compliance with limits in Condition D.9.1, as approved by IDEM.

(c) From the date of the approved stack test results are available, the Permittee shall operate the catalytic oxidizer at or above the hourly average temperature as observed during the compliant stack test.

D.9.6 Parametric Monitoring

A continuous monitoring system shall be calibrated, maintained, and operated on the catalytic oxidizer for measuring operating temperature. The output of this system shall be recorded, and that temperature shall be at or above the hourly average temperature used to demonstrate compliance during the most recent compliance stack test. If the continuous monitoring system is not in operation, the temperature will be recorded manually once every 15-minute period.

D.9.7 Catalyst Replacement

The catalysts shall be replaced a minimum of every twenty-four (24) months provided that the catalytic oxidizer is achieving the required overall **control** efficiency. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.9.8 Record Keeping Requirements

~~(a) To document compliance with Condition D.9.1, the Permittee shall maintain records of material safety data sheets (MSDS), or equivalent, to verify the VOC content of each coating material and solvent used.~~

(a) To document compliance with Condition D.9.1, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limits and/or the VOC emission limits established in Condition D.9.1.

(1) The VOC content of each coating material and solvent used less water.

(2) The amount of coating material and solvent used on a monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) The monthly cleanup solvent usage; and

(4) The total VOC usage for each month.

(5) The VOC emitted (in tons per year) based on: VOC delivered x (1 - % destruction efficiency/100) + VOC in cleaning solvent.

(b) To document compliance with Condition D.9.6, the Permittee shall maintain records of the **continuous temperature records (on an hourly average basis) for the catalytic oxidizer and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test** ~~computer collected data~~.

(c) To document compliance with Condition D.9.7, the Permittee shall maintain records of the catalyst replacement.

(d) All records shall be maintained in accordance with Section C- General Record Keeping Requirements, of this permit.

SECTION D.~~12~~ 10 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(~~oo~~ **II**) One (1) applicator cleaning area, installed January 1991 consisting of tanks 1 through 7, exhausted through stacks 0299, 0300 and 0301, capacity: 150 gallons each for tanks 1and 2, 650 gallons for tank 3, 500 gallons each for tanks 4 and 5, 400 gallons for tank 6 and 500 gallons for tank 7.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.~~12~~**10**.1 PSD Limit [326 IAC 2-2] [40 CFR 52.21]

Pursuant to CP 003-8609-00013 issued on October 17, 1997, the VOC emissions from the Quartz Fabric oven (emission unit 811)(Section D.3), the two (2) MAG VZ6 ovens (Section D.8), and the applicator cleaning area (Section D.~~12~~**10**) shall be limited to less than 40 tons per twelve (12) consecutive months of VOC. An increase in total VOC emissions from these equipment above 40 tons per year shall require a PSD permit pursuant to 326 IAC 2-2 and 40 CFR 52.21 before such change may occur.

D.~~12~~**10**.2 Volatile Organic Compounds (VOC)

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations) for cold cleaner operations constructed after January 1980, the owner or operator shall:

(a) Equip the cleaner with a cover;

(b) Equip the cleaner with a facility for draining cleaned parts;

(c) Close the degreaser cover whenever parts are not being handled in the cleaner;

(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(e) Provide a permanent, conspicuous label summarizing the operation requirements;

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.~~12~~**10**.3 Volatile Organic Compounds (VOC)

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility construction of which commenced after July 1, 1990 shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38^{O}C) (one hundred degrees Fahrenheit (100^{O}F));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^{O}C) (one hundred degrees Fahrenheit (100^{O}F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^{O}C) (one hundred degrees Fahrenheit (100^{O}F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9^{O}C) (one hundred twenty degrees Fahrenheit (120^{O}F)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent is used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:

(1) Close the cover whenever articles are not being handled in the degreaser.

(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.~~12~~**10**.4 Record Keeping Requirements

(a) To document compliance with Condition D.~~12~~**10**.1, the Permittee shall maintain records in accordance with (1) through (~~4~~ **5**) below. Records maintained for (1) through (~~4~~ **5**) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Conditions D.~~12~~**10**.1.

(1) The ~~amount and~~ VOC content of each coating material and solvent used **less water**.

(2) The amount of coating material and solvent used on a monthly basis.

(a) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(b) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

~~(2) A log of the dates of use;~~

(3) The monthly cleanup solvent usage; and

(~~3~~ **4**) The total VOC usage for each month~~; and~~

(~~4~~ **5**) The weight of VOCs emitted for each compliance period.

(b) All records shall be maintained in accordance with Section C- General Record Keeping Requirements, of this permit.

D.~~12~~**10**.5 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.~~12~~**10**.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.~~13~~ 11 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour [326 IAC 6-2-4]:

(1) One (1) 7.54 MMBtu natural gas fired boiler, designated as Boiler 1, installed in 1971, exhausting at Stack/Vent 0218.

(2) One (1) 7.54 MMBtu natural gas fired boiler, designated as Boiler 2, installed in 1971, exhausting at Stack/Vent 0222.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.~~13~~**11**.1 Particulate Matter (PM) [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3**(d)** (Particulate Matter Emission Limitations for Sources of Indirect Heating) the PM emissions from each boiler shall be limited to 0.80 pounds per MMBtu heat input.

SECTION D.~~14~~ 12 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(b) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.~~14~~**12**.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate for each of the manufacturing activities shall not exceed allowable PM emission rate based on the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

Forms

13. IDEM has determined that the only boilers at this source are rated at less than ten (10) MMBtu/hr and the certification form is not required for boilers of this size. Therefore, the natural gas-fired boiler certification form was deleted.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
NATURAL GAS FIRED BOILER CERTIFICATION

Source Name: Phelps Dodge Magnet Wire Company
Source Address: 4300 New Haven Avenue, Fort Wayne, In 46803
Mailing Address: 2131 South Coliseum Boulevard, Fort Wayne, In 46803
Part 70 Permit No.: T003-6925-00013

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Report period
Beginning: _____
Ending: _____

Boiler Affected	Alternate Fuel	Days burning alternate fuel	
		From	To

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Operating Permit

Source Background and Description

Source Name:	Phelps Dodge Magnet Wire Company
Source Location:	4300 New Haven Avenue, Ft. Wayne, Indiana 46803
County:	Allen
SIC Code:	3357
Operation Permit No.:	T003-6925-00013
Permit Reviewer:	ERG/RM

The Office of Air Quality (OAQ) has reviewed a Part 70 permit application from Phelps Dodge Magnet Wire Company relating to the operation of wire coating process.

Source Definition

This source recently (December 1999) sold their enamel production process to P.D. George Company. P.D. George supplies enamel to Phelps Dodge as well as other companies. The enamel production process is located on the same property as Phelps Dodge, however, P.D. George is a separate company and the SIC codes are different between the two sources. Therefore, these two plants are considered two separate sources.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) Three (3) Quartz Fabric wire enameling ovens, installed before 1977, emission unit number 701-702, 703-704 and 705-706, with a maximum capacity of 33 pounds of magnet wire per hour each. Emissions shall be controlled by external thermal oxidizers (not integral) exhausted at Stack/Vent ID 0023.

(b) Two (2) Quartz Fabric wire enameling ovens, installed before 1977, emission unit number 707-708 and 709-710, with a maximum capacity of 33 pounds of magnet wire per hour each. Emissions shall be controlled by external thermal oxidizers (not integral) exhausted at Stack/Vent ID 0020.

(c) Four (4) Quartz Fabric wire enameling ovens, installed before 1977, emission unit number 804, 805, 808, and 809, with a maximum capacity of 80 pounds of magnet wire per hour each. Emissions shall be controlled by external thermal oxidizers (not integral) exhausted at Stack/Vent ID 0033.

(d) One (1) Quartz Fabric wire enameling oven, installed before 1977, emission unit number 810, with a maximum capacity of 80 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0024.

(e) One (1) Lepel Fabric wire enameling oven, installed before 1980, emission unit number 807, with a maximum capacity of 80 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent 0027.

(f) One (1) Lepel Fabric wire enameling oven, installed before 1980, emission unit number 806, with a maximum capacity of 80 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent 0028.

(g) One (1) Lepel Fabric wire enameling oven, installed before 1980, emission unit number 803, with a maximum capacity of 80 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent 0030.

(h) One (1) Lepel Fabric wire enameling oven, installed before 1980, emission unit number 802, with a maximum capacity of 80 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent 0031.

(i) One (1) Quartz Fabric wire enameling oven, installed 1992, emission unit number 811, with a maximum capacity of 80 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0024.

(j) One (1) SICME ES enameling oven, installed March 1991, emission unit number 695, with a maximum capacity of 90 pounds of magnet wire per hour. Emissions shall be controlled by an internal thermal oxidizer (not integral) exhausted at Stack/Vent ID 0066.

(k) One (1) SICME ES wire enameling oven, installed March 1991, emission unit number 690, with a maximum capacity of 90 pounds of magnet wire per hour. Emissions shall be controlled by an internal thermal oxidizer (not integral) exhausted at Stack/Vent ID 0068.

(l) One (1) SICME ES wire enameling oven, installed March 1991, emission unit number 605, with a maximum capacity of 90 pounds of magnet wire per hour. Emissions shall be controlled by an internal thermal oxidizer (not integral) exhausted at Stack/Vent ID 0069.

(m) One (1) SICME ES wire enameling oven, installed March 1991, emission unit number 600, with a maximum capacity of 90 pounds of magnet wire per hour. Emissions shall be controlled by an internal thermal oxidizer (not integral) exhausted at Stack/Vent ID 0071.

(n) One (1) Square/Rectangular wire enameling oven, installed before 1980, emission unit number 610, with a maximum capacity of 66.67 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0091.

(o) One (1) Square/Rectangular wire enameling oven, installed before 1980, emission unit number 640, with a maximum capacity of 66.67 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0113.

(p) One (1) Square/Rectangular wire enameling oven, installed before 1980, emission unit number 620, with a maximum capacity of 66.67 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0118.

(q) One (1) Square/Rectangular wire enameling oven, installed before 1980, emission unit number 670, with a maximum capacity of 66.67 pounds of magnet wire per hour.

Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0122.

(r) One (1) Square/Rectangular wire enameling oven, installed before 1980, emission unit number 680, with a maximum capacity of 66.67 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0133.

(s) One (1) Square/Rectangular wire enameling oven, installed before 1980, emission unit number 660, with a maximum capacity of 66.67 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0140.

(t) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 351-352, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0172.

(u) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 353-354, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0173.

(v) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 355-356, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0174.

(w) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 367-368, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0175.

(x) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 365-366, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0176.

(y) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 363-364, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0177.

(z) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 373-374, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0196.

(aa) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 371-372, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0197.

(bb) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 369-370, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0198.

(cc) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 357-358, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0199.

(dd) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 359-360, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0200.

(ee) One (1) MOCO wire enameling oven, installed before 1980, emission unit number 361-362, with a maximum capacity of 33.33 pounds of magnet wire per hour. Emissions shall be controlled by an external thermal oxidizer (not integral) exhausted at Stack/Vent ID 0201.

(ff) One (1) MAG VEL 6 wire enameling pilot oven with an integral internal catalytic oxidizer, installed November 11, 1993, and a maximum capacity of 133.33 pounds of magnet wire per hour. Emissions shall be exhausted at Stack/Vent 1041-1044.

(gg) One (1) MAG VEL 8 wire enameling pilot oven with an integral internal catalytic oxidizer, installed November 11, 1993, and a maximum capacity of 133.33 pounds of magnet wire per hour. Emissions shall be exhausted at Stack/Vent 1048-1051.

(hh) One (1) MAG HZ 4 wire enameling pilot oven with an integral internal catalytic oxidizer, installed November 11, 1993, and a maximum capacity of 133.33 pounds of magnet wire per hour. Emissions shall be exhausted at Stack/Vent 1053.

(ii) One (1) MAG VZ 6 wire enameling oven, known as No.1, with an integral internal catalytic oxidizer, emission unit number 301-309, installed late 1998 or early 1999, with a maximum capacity of 1,158 pounds of magnet wire per hour. Emissions shall be exhausted at Stack/Vent 0383-0388.

(jj) One (1) MAG VZ 6 wire enameling oven, known as No. 2 with an integral internal catalytic oxidizer, emission unit number 310-318, installed late 1998 or early 1999, with a maximum capacity of 1,158 pounds of magnet wire per hour. Emissions shall be exhausted at Stack/Vent 0389-0394.

(kk) One (1) MAG-VZ/5 oven with a maximum capacity of 1,146 pounds magnet wire per hour, consisting of three (3) nine (9) line machines, installed in 2000, equipped with two (2) integral catalytic oxidizers for VOC control, exhausted through stacks 398, 399, and 400, as well as cooling stacks 401, 402 and 403.

(ll) One (1) SICME-NER wire enameling oven, emission unit number 650, installed 2001, with a maximum capacity of 444 pounds magnet wire per hour, equipped with a thermal oxidizer (not integral) for emissions control, exhausted through stack 407 through 414, 416, and 417.

(mm) One (1) SICME-VGR wire enameling oven, emission unit number 310, installed 2001, with a maximum capacity of 366 pounds magnet wire per hour, equipped with a thermal oxidizer (not integral) for VOC control, exhausted through stacks 405 and 406.

(nn) One (1) MAG-VEL8 wire enameling pilot oven, emission unit number 1071, installed 2001, with a maximum capacity of 244 pounds magnet wire per hour, with an internal catalytic oxidizer integral to the process, exhausted through stacks 1070 and 1071.

(oo) One (1) applicator cleaning area, installed January 1991 consisting of tanks 1 through 7, exhausted through stacks 0299, 0300 and 0301, capacity: 150 gallons each for tanks

1and 2, 650 gallons for tank 3, 500 gallons each for tanks 4 and 5, 400 gallons for tank 6 and 500 gallons for tank 7.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.

(1) One (1) 7.54 MMBtu natural gas fired boiler, designated as Boiler 1, installed in 1971, exhausting at Stack/Vent 0218.

(2) One (1) 7.54 MMBtu natural gas fired boiler, designated as Boiler 2, installed in 1971, exhausting at Stack/Vent 0222.

(b) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu per hour.

(c) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.

(d) The following VOC and HAP storage containers:

(1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

(2) Vessels storing lubricating oils, hydraulic oils, machining oils and machining fluids.

(e) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.

(f) Machining where an aqueous cutting coolant continuously floods the machining interface.

(g) Cleaners and solvents characterized as follows:

(1) Having a vapor pressure equal to or less than 2 kPa; 15mm Hg; or 0.3 psi measure at 38 degrees C or;

(2) Having a vapor press equal to or less than 0.7 kPa; 5mm Hg; or 0.1 psi measured at 20 degrees C; the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

(h) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

(i) Closed loop heating and cooling systems.

(j) Any of the following structural steel and bridge fabrication activities:

(1) Cutting 200,000 linear feet or less of one inch (1") plate or equivalent.

(2) Using 80 tons or less of welding consumables.

(k) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.

(l) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs.

(m) Noncontact cooling tower systems with forced and induced draft cooling tower system not regulated under a NESHAP.

(n) Quenching operations used with heat treatment processes.

(o) Replacement or repair of electorstatic precipitators, bags in baghouses and filters in other air filtration equipment.

(p) Heat exchanger cleaning and repair.

(q) Process vessel degassing and cleaning to prepare for internal repairs.

(r) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.

(s) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks and fluid handling equipment.

(t) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.

(u) On-site fire and emergency response training approved by the department.

(v) Emergency generator as follows: Natural gas turbines or reciprocating engines not exceeding 16,000 horsepower. One (1) Cummins 395 HP natural gas emergency generator exhausting to stack 415.

(w) Stationary fire pumps.

(x) A laboratory as defined in 326 IAC 2-7-1(21)(D).

(y) Emission units whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(d)(1);

(1) One (1) MAG HM 8 wire enameling hot melt pilot oven with an integral internal catalytic oxidizer, installed April 1998, with a maximum capacity of 116 pounds of magnet wire per hour. Emissions shall be exhausted at Stack/Vent 1070-1071.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) CP 003-2824, issued on March 25, 1993;

(b) Exemption letter, issued on October 30, 1990;

(c) OP 02-03-86-0595, issued on May 28, 1982;

(d) OP 02-03-86-0596, issued on May 28, 1982;

(e) OP 02-03-86-0597, issued on May 28, 1982; and

(f) CP 003-8609-00013, issued on October 17, 1997;

(g) CP 003-9521-00013, issued June 16, 1998;

(h) CP 003-6199-00013, issued February 11, 1997;

(i) CP 003-3268-00013, issued February 2, 1994;

(j) CP 003-3084-00013, issued July 2, 1993;

(k) CP 003-1938-00013, issued December 21, 1990;

(l) PC (02) 1535, issued August 17, 1983;

(m) Minor Source Modification 003-11803-00013, issued March 8, 2000;

(n) CP 003-9521-00013, issued June 16, 1998; and

(o) Significant Source Modification 003-12801-00013, pending.

All conditions from previous approvals were incorporated into this Part 70 permit.

Air Pollution Control Justification as an Integral Part of the Process

The company has submitted the following justification such that the VOC internal catalytic oxidizers be considered as an integral part of the wire coating process:

The VOCs will be oxidized using only the process heat supplied by the curing ovens.

IDEM, OAQ has evaluated the justifications and agreed that the catalytic oxidation systems will be considered as an integral part of the wire coating process. Therefore, the permitting level will be determined using the potential emissions after the catalytic VOC oxidation systems. Operating conditions will be specified in the proposed permit that the catalytic VOC oxidation systems shall operate at all times when the wire coating process is in operation.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Part 70 permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete Part 70 permit application for the purposes of this review was received on October 15, 1996 Additional information was received on February 27, 1998.

A notice of completeness letter was mailed to the source on October 29, 1996.

Emission Calculations

See Appendix A of this document for detailed emissions calculations pages 1 through 4. The VOC and HAP emissions for the enamel production operation and applicator cleaning were taken from the Technical Support Document (TSD) for the Construction Permit CP 003-8609-00013. HAP emissions from the ovens were also determined from the TSD for CP 003-8609-00013.

Potential to Emit

Pursuant to 326 IAC 1-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable unit it has been required in a federally enforceable permit.

Pollutant	Potential Emissions (tons/year)
PM	less than 100
PM-10	less than 100
SO_2	less than 100
VOC	greater than 250
CO	less than 100
NO_x	less than 100

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential Emissions (tons/year)
Cresols/cresylic Acid	greater than 10
Naphthalene	less than 10
Phenol	greater than 10
Xylenes	greater than 10
TOTAL	greater than 25

(a) The potential emissions (as defined in 326 IAC 1-2-55) of PM10 and VOC are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(b) The potential emissions (as defined in 326 IAC 1-2-55) of any single HAP is equal to or greater than ten (10) tons per year and the potential emissions (as defined in 326 IAC 1-2-55) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 1999 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	--
PM-10	9

Pollutant	Actual Emissions (tons/year)
SO_2	0
VOC	282
CO	4
NO_x	22

Potential to Emit after Issuance

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
Quartz Fabric Oven 811	---	---	---	less than 40	---	---	---
Two MAG VZ6 ovens	---	---	---		---	---	---
Applicator Cleaning	---	---	---		---	---	---
MAG VZ/5	---	---	---	less than 40	---	---	---
SICME-NER	---	---	---	less than 40	---	---	Single HAP less than 10; combination of HAP less than 25
SICME-VGR	---	---	---		---	---	Single HAP less than 10; combination of HAP less than 25
MAG-VEL 8	---	---	---		---	---	---
Cummins 395 HP emergency generator (insignificant activity)	---	---	---		---	---	---
All other ovens	---	---	---	Limited by 326 IAC 8-2-8 or 326 8-6	---	---	---

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
Total Emissions	---	---	---	greater than 250	---	---	Single HAP greater than 10; combination of HAP greater than 25

County Attainment Status

The source is located in Allen County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Allen county has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Allen County has been classified as attainment or unclassifiable for all pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Federal Rule Applicability

(a) There are no New Source Performance Standards (326 IAC 12) applicable to this source.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration [PSD])

This source is a major source under 326 IAC 2-2 and 40 CFR 52.21. The source has not had a significant increase emissions therefore no modification has required a PSD review.

The Quartz Fabric oven 811, the two MAG V26 ovens, and the applicator cleaning area are limited to less than a total of 40 tons per year of VOC to render PSD not applicable to that modification.

Also, the SICME-NER and SICME-VGR are limited to less than a total of 39 tons per year of VOC. This is so that the construction of these two ovens along with the construction of the MAG-VEL8 oven and the Cummins 395 HP emergency generator did not result in an emissions increase of VOC greater than 40 tons per year. Therefore, PSD was not applicable to this modification.

The MAG-VZ/5 has emissions less than 40 tons per year of VOC. Therefore, PSD was not applicable when it was constructed.

326 IAC 2-6 (Emission Reporting)

The facilities covered by this modification are subject to 326 IAC 2-6 (Emission Reporting), because of their potential to emit more than 100 tons per year of VOC. Pursuant to this rule, the owner operator of these facilities must annually submit an emission statement of the facilities. The annual statement must be received by July 1 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) opacity in any one (1) six (6) minute averaging period as determined by 326 IAC 5-1-4,

(b) Opacity shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or (15) one (1) minute overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - MAG Ovens and Ovens 310, 600, 605, 650, 690, 695 and 811

326 IAC 2-4.1 (New Source Toxics Control)

This rule does not apply to ovens 600, 605, 690, 695, and 811 because these were all installed before the applicability date of July 27, 1997. All of the MAG ovens have emissions of a single HAP less than 10 tons per year and emissions of a combination of HAP less than 25 tons per year. Also many of the MAG ovens were installed before July 27, 1997. Therefore, this rule does not apply to the MAG ovens. Ovens 310 and 650 are not subject to 326 IAC 2-4.1 because they are limited to emissions of a single HAP less than 10 tons per year and emissions of a combination of HAP less than 25 tons per year.

326 IAC 8-2-8 Magnet Wire Coating Operations

State rule 326 IAC 8-2-8 applies to the four (4) SICME ES ovens (unit numbers 600,605, 690, and 695) the five (5) pilot ovens (MAG VEL6, MAG VEL 8, MAG HZ 4, MAG HM 8, and MAG-VEL 8), one (1) Quartz fabric oven (unit # 811), two (2) MAG VZ/6 ovens (known as No. 1 and No. 2), one (1) MAG VZ/5 oven, a SICME-NER (unit #650) and a SICME-VGR (unit #310) oven.

Pursuant to 326 IAC 8-2-8 (Magnet Wire Coating Operations), the volatile organic compound (VOC) content of electrically insulating varnishes or enamel applied to aluminum or copper wire for use in electrical machinery shall be limited to 1.7 pounds VOC per gallon of coating less water delivered to the applicator.

This limit includes the evaporation of thinners being added to coatings to adjust viscosity, therefore, it is necessary to keep coating and solvent containers covered at all times to prevent solvent evaporation.

The internal catalytic oxidizer associated with the Quartz Fabric oven 811 shall operate with an overall efficiency of 91.1%.

The internal catalytic oxidizers associated with the MAG VEL 6, MAG VEL 8, and MAG HZ 4 oven shall operate with an overall efficiency of not less than 94.8% at all times when the wire enameling oven is in operation.

The MAG-VZ/5 and two (2) MAG VZ6 ovens must operate with an overall efficiency of not less than 92.3% at all times when the wire enameling ovens are in operation.

The internal thermal oxidizers associated with the four (4) SICME ES ovens (units 600, 605, 690, and 695) must operate with an overall efficiency of not less than 96.7% at all times when the wire enameling ovens are in operation.

The thermal oxidizers associated with the SICME-NER (Unit 650) and SICME-VGR (unit 310) must operate with an overall efficiency of not less than 98% at all times when the wire enameling ovens are in operation.

The internal catalytic oxidizer integral to the MAG-VEL 8 (unit #1071) must operate with an overall efficiency of not less than 95% at all times when the wire enameling oven is in operation.

These overall efficiencies are necessary to ensure compliance with 326 IAC 8-2-8.

State Rule Applicability - Ovens 701-702, 703-704, 705-706, 707-708, 709-710, 610, 640, 620,670, 680, 660, 351-352, 353-354, 355-356, 367-368, 365-366, 363-364, 373-374, 371-372, 369-370, 357-358, 359-360, 361-362, and 802 through 810

326 IAC 2-4.1 (New Source Toxics Control)

This rule does not apply to ovens 701-702, 703-704, 705-706, 707-708, 709-710, 610, 640, 620,670, 680, 660, 351-352, 353-354, 355-356, 367-368, 365-366, 363-364, 373-374, 371-372, 369-370, 357-358, 359-360, 361-362, and 802 through 810 because these were all installed before the applicability date of July 27, 1997.

326 IAC 8-2-8 (Magnet Wire Coating Operations

These ovens are not subject to 326 IAC 8-2-8 because they were installed before 1980.

326 IAC 8-6 (Organic Solvent Emission Limitations)

It is unknown whether these ovens were constructed before 1974, therefore it must be assumed that they were constructed after 1974 and before 1980. Therefore these ovens are assumed to be subject to 326 IAC 8-6. This rule requires that VOC emissions be reduced by 85%. All of these ovens have oxidizers that achieve an overall efficiency of 85 or 90% depending on the oven. These oxidizers ensure compliance with 326 IAC 8-6.

State Rule Applicability - Applicator Cleaning Operations

326 IAC 8-1-6 (New Facilities; general reduction requirements)

The applicator cleaning operation constructed in 1991 does not have the potential to emit more than 25 tons per year of VOC and therefore, 326 IAC 8-1-6 is not applicable.

326 IAC 8-3-2 (Cold Cleaner Operations)

The applicator cleaning operations are subject to the requirements of 326 IAC 8-3-2. This rule requires that the cleaner be equipped with a cover and a facility for draining cleaned parts as well as that waste solvent be stored only in covered containers.

326 IAC 8-3-5 (Cold Cleaner Operation and Control)

The applicator cleaning operation is subject to the requirements of 326 IAC 8-3-5(a). This rule requires that the owner and operator of a cold cleaner degreaser facility shall ensure that the degreaser is equipped with a cover that must be designed so that it can be easily operated with one (1) hand if certain conditions exist. The degreaser must be equipped with a facility for draining cleaned articles.

State Rule Applicability - Insignificant Activities

326 IAC 6-2-3 (Particulate Matter Emission Limitations for Sources of Indirect Heating)

Pursuant to 326 IAC 6-2-3 (Particulate Matter Emission Limitations for Sources of Indirect Heating) the PM emissions from each boiler shall be limited to 0.80 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}}$$

where

C = 50 u/m^3
Pt = emission rate limit (lbs/MMBtu)
Q = total source heat input capacity (MMBtu/hr) (15.08 MMBtu/hr)
N = number of stacks (2)
a = plume rise factor (0.67)
h = stack height (ft) (19.5)

Based on this equation Pt is 0.94 lbs/MMBtu. However, pursuant to 326 IAC 6-2-3(d), particulate emissions from indirect heaters in existence before June 8, 1972 shall not exceed 0.8 lb/MMBtu heat input.

326 IAC 6-3-2 (Process Operations)

Pursuant to 326 IAC 6-3-2, the allowable PM emission rate from the insignificant brazing, equipment, cutting torches, soldering and welding equipment shall not exceed allowable PM emission rate based on the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

326 IAC 8-2-8 (Magnet Wire Coating Operations)

The MAG HM8 oven is not subject to this rule because actual emissions are less than 15 pounds per day and it was installed in 1998.

326 IAC 8-1-6 (New Facilities; general reduction requirements)

The MAG HM8 oven is not subject to this rule because potential emissions of VOC are less than 25 tons per year.

Testing Requirements

VOC emissions from the magnet wire ovens are calculated according to the methodology set out in the attached Appendix A: Emission Calculations. In order to comply with 326 IAC 8-2-8, the oxidizers for ovens 600, 605, 690, 695, MAG VEL 6, MAG VEL 8, MAG HZ4, 301-309, 310-318, and 811 must operate at an efficiency of no less than between 90 and 98% depending on the oven. Both the claimed control efficiency and the control efficiency required to comply with 326 IAC 8-2-8 are greater than 85%. Therefore, performance testing is required to verify that the oxidizers are achieving the required control efficiency. One representative oven from each group of ovens will be tested once per permit term. The ovens have been grouped based on design, control efficiency, and temperature required. The ovens tested must not be an oven that has previously been tested.

Ovens MAG-VZ/5, 310, 650 and 1071 are also subject to 326 IAC 8-2-8 and the control efficiency required is greater than 85%. However, these ovens have been recently constructed. Therefore performance tests are required for the ovens within 180 days of their initial startup.

Ovens 701-702, 703-704, 705-706, 707-708, 709-710, 802, 803, 804, 805, 806, 807, 808, and 809 must operate with an efficiency of no less than 90% in order to comply with 326 IAC 8-6. Therefore, performance testing is required once per permit cycle (on a representative oven per group) to verify that the oxidizers are achieving the required control efficiency.

Ovens 610, 640, 620, 670, 680, 660, 351-352, 353-354, 355-356, 367-368, 365-366, 363-364, 373-374, 371-372, 369-370, 357-358, 359-360, and 361-362 must operate with an efficiency of no less than 85% in order to comply with 326 IAC 8-6. Therefore, performance testing is required on a representative oven per group to verify that the oxidizers are achieving the required control efficiency. The test is being required within 60 days of issuance of the permit because the minimum temperature included in the permit is based on similar ovens in other plants. It is important to determine a minimum temperature specific to these ovens as soon as possible.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

1. Wire enamel ovens 701-702, 703-704, 705-706, 707-708, 709-710, 804, 805, 808, 809, 810, 807, 806, 803, 802, 811, 695, 690, 605, 600, MAG VEL6, MAG VEL8, MAG HZ4, 301-309, 310-318, 610, 620, 640, 670, 680, 660, 351-352, 353-354, 355-356, 367-368, 365-366, 363-364, 373-374, 371-372, 369-370, 357-358, 359-360, 361-362, and MAG VZ/5, 650, 310, and 1071 have applicable compliance monitoring conditions as specified below:

   Compliance with the minimum temperature will be monitored by computer collected data generated continuously. Eight-hour average temperatures will be made available to IDEM upon request and one-hour temperatures records will be made available within five business days from request. The temperatures will be reported based on an eight-hour average. The oxidizers shall operate with a five (5) degree buffer such that if the eight-hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature. If a one-hour temperature is less than the established minimum temperature, this will be considered noncompliance.

   For the catalystic oxidizers, the catalysts shall be replaced a minimum of every twenty-four (24) months provided that the catalytic oxidizer is achieving the required overall efficiency.

   These monitoring conditions are necessary because the oxidizers must operate properly to ensure compliance with the permit conditions of CP 003-8609-00013 requirements of 326 IAC 8-2-8 (Magnet Wire Coating Operations), 326 IAC 8-6 (Organic Solvent Emission Limitations), and 326 IAC 2-7 (Part 70).

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Quality (OAQ) Part 70 Application Form GSD-08.

(a) This source will emit levels of air toxics greater than those that constitute major source applicability according to Section 112 of the 1990 Clean Air Act Amendments.

(b) See attached calculations for detailed air toxic calculations.

Conclusion

The operation of this magnet wire coating source shall be subject to the conditions of the attached proposed Part 70 Permit No. T003-6925-00013.

Appendix A: Emissions Calculations
VOC and Particulate from Wire Coating Operations

Company Name: Phelps Dodge Magnet Wire Company
Address City IN Zip: 4300 New Haven Avenue, Ft. Wayne, Indiana 46803
Operating Permit: T003-6925
Plt ID: 003-00013
Reviewer: ERG/RM
Date: September 21, 2000

Material	Density (Lb/Gal)	Weight % Volatile (H20& Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential ton/yr	lb VOC /gal solids	Transfer Efficiency	(NOT INTEGRAL) control efficiency %	Potential VOC after control tons per year
Oven 600 (worst case)	8.72	85.00%	0.0%	85.0%	0.0%	10.94%	0.26400	7.57	7.41	7.41	14.81	355.51	64.88	0.00	67.75	100%	96.70%	2.14
Oven 605 (worst case)	8.72	85.00%	0.0%	85.0%	0.0%	10.94%	0.26400	7.57	7.41	7.41	14.81	355.51	64.88	0.00	67.75	100%	96.70%	2.14
Oven 690 (worst case)	8.72	85.00%	0.0%	85.0%	0.0%	10.94%	0.26400	7.57	7.41	7.41	14.81	355.51	64.88	0.00	67.75	100%	96.70%	2.14
Oven 695 (worst case)	8.72	85.00%	0.0%	85.0%	0.0%	10.94%	0.26400	7.57	7.41	7.41	14.81	355.51	64.88	0.00	67.75	100%	96.70%	2.14
Oven 610 (worst case)	8.80	87.20%	0.000%	87.2%	0.000%	10.00%	0.01500	66.670	7.67	7.67	7.67	184.18	33.61	0.00	76.74	100%	85.00%	5.04
Oven 620 (worst case)	8.80	87.20%	0.000%	87.2%	0.000%	10.00%	0.01500	66.670	7.67	7.67	7.67	184.18	33.61	0.00	76.74	100%	85.00%	5.04
Oven 640 (worst case)	8.80	87.20%	0.000%	87.2%	0.000%	10.00%	0.01500	66.670	7.67	7.67	7.67	184.18	33.61	0.00	76.74	100%	85.00%	5.04
Oven 660 (worst case)	8.80	87.20%	0.000%	87.2%	0.000%	10.00%	0.01500	66.670	7.67	7.67	7.67	184.18	33.61	0.00	76.74	100%	85.00%	5.04
Oven 670 (worst case)	8.80	87.20%	0.000%	87.2%	0.000%	10.00%	0.01500	66.670	7.67	7.67	7.67	184.18	33.61	0.00	76.74	100%	85.00%	5.04
Oven 680 (worst case)	8.80	87.20%	0.000%	87.2%	0.000%	10.00%	0.01500	66.670	7.67	7.67	7.67	184.18	33.61	0.00	76.74	100%	85.00%	5.04
Oven 351-352 (worst case)	9.27	72.50%	0.000%	72.5%	0.000%	31.00%	0.00700	33.330	6.72	6.72	1.57	37.63	6.87	0.00	21.68	100%	85.00%	1.03
Oven 353-354 (worst case)	9.27	72.50%	0.000%	72.5%	0.000%	31.00%	0.00700	33.330	6.72	6.72	1.57	37.63	6.87	0.00	21.68	100%	85.00%	1.03
Oven 355-356 (worst case)	9.27	72.50%	0.000%	72.5%	0.000%	31.00%	0.00700	33.330	6.72	6.72	1.57	37.63	6.87	0.00	21.68	100%	85.00%	1.03
Oven 357-358 (worst case)	9.27	72.50%	0.000%	72.5%	0.000%	31.00%	0.00700	33.330	6.72	6.72	1.57	37.63	6.87	0.00	21.68	100%	85.00%	1.03
Oven 359-360 (worst case)	9.27	72.50%	0.000%	72.5%	0.000%	31.00%	0.00700	33.330	6.72	6.72	1.57	37.63	6.87	0.00	21.68	100%	85.00%	1.03
Oven 361-362 (worst case)	9.27	72.50%	0.000%	72.5%	0.000%	31.00%	0.00700	33.330	6.72	6.72	1.57	37.63	6.87	0.00	21.68	100%	85.00%	1.03
Oven 363-364 (worst case)	9.27	72.50%	0.000%	72.5%	0.000%	31.00%	0.00700	33.330	6.72	6.72	1.57	37.63	6.87	0.00	21.68	100%	85.00%	1.03
Oven 365-366 (worst case)	9.27	72.50%	0.000%	72.5%	0.000%	31.00%	0.00700	33.330	6.72	6.72	1.57	37.63	6.87	0.00	21.68	100%	85.00%	1.03
Oven 367-368 (worst case)	9.27	72.50%	0.000%	72.5%	0.000%	31.00%	0.00700	33.330	6.72	6.72	1.57	37.63	6.87	0.00	21.68	100%	85.00%	1.03
Oven 369-370 (worst case)	9.27	72.50%	0.000%	72.5%	0.000%	31.00%	0.00700	33.330	6.72	6.72	1.57	37.63	6.87	0.00	21.68	100%	85.00%	1.03
Oven 371-372 (worst case)	9.27	72.50%	0.000%	72.5%	0.000%	31.00%	0.00700	33.330	6.72	6.72	1.57	37.63	6.87	0.00	21.68	100%	85.00%	1.03
Oven 373-374 (worst case)	9.27	72.50%	0.000%	72.5%	0.000%	31.00%	0.00700	33.330	6.72	6.72	1.57	37.63	6.87	0.00	21.68	100%	85.00%	1.03
Oven 701-702 (worst case)	8.01	73.00%	0.000%	73.0%	0.000%	23.50%	0.00221	16.500	5.85	5.85	0.21	5.11	0.93	0.00	24.88	100%	90.00%	0.09
Oven 703-704 (worst case)	8.01	73.00%	0.000%	73.0%	0.000%	23.50%	0.00221	16.500	5.85	5.85	0.21	5.11	0.93	0.00	24.88	100%	90.00%	0.09
Oven 705-706 (worst case)	8.01	73.00%	0.000%	73.0%	0.000%	23.50%	0.00221	16.500	5.85	5.85	0.21	5.11	0.93	0.00	24.88	100%	90.00%	0.09
Oven 707-708 (worst case)	8.01	73.00%	0.000%	73.0%	0.000%	23.50%	0.00221	16.500	5.85	5.85	0.21	5.11	0.93	0.00	24.88	100%	90.00%	0.09
Oven 709-710 (worst case)	8.01	73.00%	0.000%	73.0%	0.000%	23.50%	0.00221	16.500	5.85	5.85	0.21	5.11	0.93	0.00	24.88	100%	90.00%	0.09
Oven 804 (worst case)	8.01	73.00%	0.000%	73.0%	0.000%	23.50%	0.00221	80.000	5.85	5.85	1.03	24.77	4.52	0.00	24.88	100%	90.00%	0.45
Oven 805 (worst case)	8.01	73.00%	0.000%	73.0%	0.000%	23.50%	0.00221	80.000	5.85	5.85	1.03	24.77	4.52	0.00	24.88	100%	90.00%	0.45
Oven 808 (worst case)	8.01	73.00%	0.000%	73.0%	0.000%	23.50%	0.00221	80.000	5.85	5.85	1.03	24.77	4.52	0.00	24.88	100%	90.00%	0.45
Oven 809 (worst case)	8.01	73.00%	0.000%	73.0%	0.000%	23.50%	0.00221	80.000	5.85	5.85	1.03	24.77	4.52	0.00	24.88	100%	90.00%	0.45
Oven 810 (worst case)	8.01	73.00%	0.000%	73.0%	0.000%	23.50%	0.00221	80.000	5.85	5.85	1.03	24.77	4.52	0.00	24.88	100%	90.00%	0.45
Oven 811 (worst case)	8.01	73.00%	0.000%	73.0%	0.000%	23.50%	0.00221	80.000	5.85	5.85	1.03	24.81	4.53	0.00	24.88	100%	91.10%	0.40
Oven 802 (worst case)	8.01	73.00%	0.000%	73.0%	0.000%	23.50%	0.00221	80.000	5.85	5.85	1.03	24.77	4.52	0.00	24.88	100%	90.00%	0.45
Oven 803 (worst case)	8.01	73.00%	0.000%	73.0%	0.000%	23.50%	0.00221	80.000	5.85	5.85	1.03	24.77	4.52	0.00	24.88	100%	90.00%	0.45
Oven 806 (worst case)	8.01	73.00%	0.000%	73.0%	0.000%	23.50%	0.00221	80.000	5.85	5.85	1.03	24.77	4.52	0.00	24.88	100%	90.00%	0.45
Oven 807 (worst case)	8.01	73.00%	0.000%	73.0%	0.000%	23.50%	0.00221	80.000	5.85	5.85	1.03	24.77	4.52	0.00	24.88	100%	90.00%	0.45
Total Emissions													593.47	0				56.11

*Limited Potential to emit is calculated by adding the VOC emissions after control for those ovens subject to 326 IAC 8-2-8, or that are required to have the oxidizer in operation because of a past permit condition, to the VOC emissions before control for those oven that do not have previoius permit conditions and are not subject to 326 IAC 8-2-8.

Limited Potential to emit (tpy)* **297.6**

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emissions Calculations
VOC and Particulate from Wire Coating Operations

Company Name: Phelps Dodge Magnet Wire Company
Address City IN Zip: 4300 New Haven Avenue, Ft. Wayne, Indiana 46803
Operating Permit: T003-6925
Plt ID: 003-00013
Reviewer: ERG/RM
Date: September 21, 2000

Material	Density (Lb/Gal)	Weight % Volatile (H20& Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential ton/yr	lb VOC /gal Solids	Transfer Efficiency	integral control efficiency	Potential VOC after integral con pounds per day	**Potential VOC after integral control tons per year**
MAG VEL 6 (worst case)	8.75	80.00%	0.0%	80.0%	0.0%	16.50%	0.00600	133.33	7.00	7.00	5.60	134.40	24.53	0.00	42.42	100%	94.80%	6.99	1.28
MAG VEL 8 (worst case)	8.75	80.00%	0.0%	80.0%	0.0%	16.50%	0.00600	133.33	7.00	7.00	5.60	134.40	24.53	0.00	42.42	100%	94.80%	12.43	2.27
MAG HZ 4 (worst case)	8.75	80.00%	0.0%	80.0%	0.0%	16.50%	0.00600	133.33	7.00	7.00	5.60	134.40	24.53	0.00	42.42	100%	94.80%	3.63	0.66
MAG VZ 6 (301-309) (worst case)	8.80	69.50%	0.0%	69.5%	0.0%	21.30%	0.00240	1146.00	6.12	6.12	16.82	403.71	73.68	0.00	28.71	100%	92.30%	31.09	5.67
MAG VZ 6 (310-318) (worst case)	8.80	69.50%	0.0%	69.5%	0.0%	21.30%	0.00240	1146.00	6.12	6.12	16.82	403.71	73.68	0.00	28.71	100%	92.30%	3.48	0.64
MAG Hot Melt Pilot (worst case)	10.60	15.80%	0.000%	15.8%	0.000%	78.00%	0.00181	156.00	1.67	1.67	0.47	11.33	2.07	0.00	2.15	100%	31.50%	7.76	1.42

Total Emissions **65.38** **11.94**

METHODOLOGY
Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emission Calculations
VOC and Particulate
From Surface Coating Operations: MAG/VZ5

Company Name: Phelps Dodge, Inc.
Address City IN Zip: 2131 S. Coliseum Blvd., Fort Wayne, Indiana 46803
Source Modification: T003-6925
Plt ID: 003-00013
Reviewer: ERG/RM
Date: September 21, 2000

Potential Emissions (uncontrolled):

Material (as applied)	Process	Density (Lb/Gal)	Weight % Volatile (H20&	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential ton/yr	lb VOC /gal solids	Transfer Efficiency	VOC control required efficiency to comply with 8-2-8
Polyester Basecoat	MAG/VZ5	9.44	56.80%	0.00%	56.80%	0.00%	31.70%	0.0060	1146.00	5.4	5.36	36.87	36.87	161.48	0.00	16.91	1	86.93%
Amide Imide Topcoat	MAG/VZ5	8.80	69.50%	0.00%	69.50%	0.00%	21.30%	0.0024	1146.00	6.1	6.12	16.82	16.82	73.68	0.00	28.71	1	92.30%
Total Uncontrolled Potential Emissions:												**53.69**	**53.69**	**235.16**	**0.00**			

Potential Emissions (controlled):

Material (as applied)	Applicant listed VOC Control Efficiency*	Controlled VOC lbs per Hour	Controlled VOC lbs per Day	Controlled VOC tons per Year
Polyester Basecoat	95.00%	**1.84**	**44.24**	**8.07**
Amide Imide Topcoat	95.00%	**0.84**	**20.19**	**3.68**
Total Controlled Potential Emissions:		**2.68**	**64.43**	**11.76**

* The VOC from the basecoat polyurethane and topcoat nylon is controlled by a catalytic oxidizer with permanent total enclosure.
A minimum overall VOC control efficiency of 92.3% is required from each unit to comply with 326 IAC 8-2-8 (Magnet wire coating operations). The applicant has stated that the unit will achieve a 95.0% control efficiency.

Required VOC Control Efficiency = (lb VOC/gal solids -E)/lb VOC/gal solids * 100
E= (1.7 lb VOC/gal of coating/(1-(1.7 lb VOC/gal of coating/7.36 lb VOC/gal coating solids)) = 2.21 lb VOC/gal of solids

Methodology:
Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids) * Transfer Efficiency
Total = Worst Coating + Sum of all solvents used
Controlled emission rate = uncontrolled emission rate * (1 - control efficiency)

Appendix A: Emissions Calculations
VOC and Particulate
Required efficiency for compliance with 326 IAC 8-2-8

Company Phelps Dodge
Address City 4300 New Haven Ave, Ft. Wayne, IN 46803
Title 003-6925
Plt 003-00013
Reviewe ERG/RM

Oven	Density (Lb/Gal)	Weight % Volatile (H20& Org	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Pounds VO per gallon less water	Pounds VO per gallon of coating	Potential VOC poun per hour	Potential VOC poun per day	Potential VOC tons per year	Particulate Potential ton/yr	lb VOC /gal Solids	Transfer Efficiency	integral co required e to comply	integral co required e for minor s	Potential V after integ pounds pe	Potential V after integ tons per y
EU #811	8.01	73.00%	0.0%	73.0%	0.0%	23.50%	0.00221	80.00	5.85	5.85	1.03	24.81	4.53	0.00	24.88	100%	91.1%		2.20	0.40
EU #600	8.72	85.00%	0.0%	85.0%	0.0%	10.94%	0.26400	7.57	7.41	7.41	14.81	355.51	64.88	0.00	67.75	100%	96.7%		11.60	2.12
EU #605	8.72	85.00%	0.0%	85.0%	0.0%	10.94%	0.26400	7.57	7.41	7.41	14.81	355.51	64.88	0.00	67.75	100%	96.7%		11.60	2.12
EU #690	8.72	85.00%	0.0%	85.0%	0.0%	10.94%	0.26400	7.57	7.41	7.41	14.81	355.51	64.88	0.00	67.75	100%	96.7%		11.60	2.12
EU #695	8.72	85.00%	0.0%	85.0%	0.0%	10.94%	0.26400	7.57	7.41	7.41	14.81	355.51	64.88	0.00	67.75	100%	96.7%		11.60	2.12
MAG VEL 6	8.75	80.00%	0.0%	80.0%	0.0%	16.50%	0.00600	133.00	7.00	7.00	5.59	134.06	24.47	0.00	42.42	100%	94.8%		6.98	1.27
MAG VEL 8	8.75	80.00%	0.0%	80.0%	0.0%	16.50%	0.00600	133.00	7.00	7.00	5.59	134.06	24.47	0.00	42.42	100%	94.8%		6.98	1.27
MAG HZ 4	8.75	80.00%	0.0%	80.0%	0.0%	16.50%	0.00600	133.00	7.00	7.00	5.59	134.06	24.47	0.00	42.42	100%	94.8%		6.98	1.27
VZ 6 (301	8.80	69.50%	0.0%	69.5%	0.0%	21.30%	0.00240	1146.00	6.12	6.12	16.82	403.71	73.68	0.00	28.71	100%	92.3%		31.07	5.67
VZ 6 (310	8.80	69.50%	0.0%	69.5%	0.0%	21.30%	0.00240	1146.00	6.12	6.12	16.82	403.71	73.68	0.00	28.71	100%	92.3%		31.07	5.67
																			131.69	24.03

Methodology

Required efficiency = (lb VOC/gal solids -E)/lb VOC/gal solids * 100
E= (1.7 lb VOC/gal of coating/(1-(1.7 lb VOC/gal of coating/7.36 lb VOC/gal coating solids)) = 2.21 lb VOC/gal of solids

Appendix A: Emissions Calculations
VOC And Particulate
From Surface Coating Operations
Emission Unit 650

Company Name: Phelps Dodge Magnet Wire Company
Address City IN Zip: 4300 New Haven Avenue
Permit Number: 003-6925-00013
Plt ID: 003-00013
Reviewer ERG/RM
Date: 10-24-00

Uncontrolled Potential Emissions

Material	Density (Lb/GAL)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Polyimide Enamel 97-68-099	8.51	89.00%	0.00%	89.00%	0.00%	10.94%	0.035	444	7.57	7.57	117.70	2824.76	515.52	0.00	69.23	100.00%
Formvar Enamel 97-64-635	8.2	90.00%	0.00%	90.00%	0.00%	12.30%	0.035	444	7.38	7.38	114.69	2752.44	502.32	0.00	60.00	100.00%
Polyester Enamel 97-72-607	8.8	85.00%	0.00%	85.00%	0.00%	18.30%	0.035	444	7.48	7.48	116.24	2789.74	509.13	0.00	40.87	100.00%
Amide-Imide Enamel 97-61-539	8.51	80.00%	0.00%	80.00%	0.00%	15.30%	0.035	444	6.81	6.81	105.80	2539.11	463.39	0.00	44.50	100.00%
										Worst Case Uncontrolled Potential to Emit:	117.70	2824.76	515.52	0.00		

Controlled Potential Emissions

Material (As Applied)	Applicant listed VOC Control Efficiency	Controlled VOC lbs per hour	Controlled VOC lbs per day	Controlled VOC tons per year
Polyimide Enamel 97-68-099	98.00%	2.35	56.50	10.31
Formvar Enamel 97-64-635	98.00%	2.29	55.05	10.05
Polyester Enamel 97-72-607	98.00%	2.32	55.79	10.18
Amide-Imide Enamel 97-61-539	98.00%	2.12	50.78	9.27
Worst Case Controlled Potential To Emit:		2.35	56.50	10.31

Methodology:
Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1 - Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC pounds per hour = Pounds VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC pounds per day = Pounds VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * 24 hr/day
Potential VOC tons per year = Pounds VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * 8760 hr/yr * (1 ton/2000 lb)
Particulate Potential Tons per Year = (units/hr) * (gal/unit) * (lbs/gal) * (1 - Weight % Volatiles) * (1 - Transfer Efficiency) * (8760 hr/yr) * (1 ton/2000 lb)
Pounds VOC per Gallon of solids = (Density (lb/gal) * Weight % organics) / (Volume % Solids) * Transfer Efficiency
Controlled emission rate = worst case uncontrolled emission rate * (1 - control efficiency)

Appendix A: Emissions Calculations
VOC And Particulate
From Surface Coating Operations
Emission Unit 310

Company Name: Phelps Dodge Magnet Wire Company
Address City IN Zip: 4300 New Haven Avenue
Permit Number: 003-6925-00013
Plt ID: 003-00013
Reviewer ERG/RM
Date: 10-24-00

Uncontrolled Potential Emissions

Material	Density (Lb/GAL)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat (gal/unit)	Maximum (units/hr)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Formvar C 97-64-360	8.48	79.50%	0.00%	79.50%	0.00%	32.00%	0.018	366	6.74	6.74	44.29	1063.02	194.00	0.00	21.07	100.00%

Worst Case Uncontrolled Potential to Emit:	44.29	1063.02	194.00	0.00

Controlled Potential Emissions

Material	Applicant listed VOC Control Efficiency	Controlled VOC lbs per hour	Controlled VOC lbs per day	Controlled VOC tons per year
Formvar C 97-64-360	98.00%	0.89	21.26	3.88

Worst Case Controlled Potential To Emit:	0.89	21.26	3.88

Methodology:
Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1 - Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC pounds per hour = Pounds VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC pounds per day = Pounds VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * 24 hr/day
Potential VOC tons per year = Pounds VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * 8760 hr/yr * (1 ton/2000 lb)
Particulate Potential Tons per Year = (units/hr) * (gal/unit) * (lbs/gal) * (1 - Weight % Volatiles) * (1 - Transfer Efficiency) * (8760 hr/yr) * (1 ton/2000 lb)
Pounds VOC per Gallon of solids = (Density (lb/gal) * Weight % organics) / (Volume % Solids) * Transfer Efficiency
Controlled emission rate = worst case uncontrolled emission rate * (1 - control efficiency)

Appendix A: Emissions Calculations
VOC And Particulate
From Surface Coating Operations
Emission Unit 1071

Company Name: Phelps Dodge Magnet Wire Company
Address City IN Zip: 4300 New Haven Avenue
Permit Number: 003-6925-00013
Plt ID: 003-00013
Reviewer ERG/RM
Date: 10-24-00

Potential Emissions (prior to internal integral catalytic oxidizer):

Material	Density (Lb/GAL)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Polyester 97-72-680	9.51	67.00%	0.00%	67.00%	0.00%	33.00%	0.0019	244	6.37	6.37	2.95	70.89	12.94	0.00	19.31	100.00%
Polyamide Imide Enamel 97-61-639	8.85	74.00%	0.00%	74.00%	0.00%	26.00%	0.00056	244	6.55	6.55	0.89	21.48	3.92	0.00	25.19	100.00%
Bondable Enamel 97-60-681	8.68	97.00%	0.00%	97.00%	0.00%	30.00%	0.0019	244	8.42	8.42	3.90	93.68	17.10	0.00	28.07	100.00%
Worst Case Potential to Emit prior to internal integral catalytic oxidizer:											3.90	93.68	17.10	0.00		

Potential Emissions (after internal integral catalytic oxidizer):

Material (As Applied)	Applicant listed VOC Control Efficiency	Controlled VOC lbs per hour	Controlled VOC lbs per day	Controlled VOC tons per year
Polyester 97-72-680	95.00%	0.15	3.54	0.65
Polyamide Imide Enamel 97-61-639	95.00%	0.04	1.07	0.20
Bondable Enamel 97-60-681	95.00%	0.20	4.68	0.85
Worst Case Potential to Emit after internal integral catalytic oxidizer:		0.20	4.68	0.85

Methodology:
Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1 - Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC pounds per hour = Pounds VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC pounds per day = Pounds VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * 24 hr/day
Potential VOC tons per year = Pounds VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * 8760 hr/yr * (1 ton/2000 lb)
Particulate Potential Tons per Year = (units/hr) * (gal/unit) * (lbs/gal) * (1 - Weight % Volatiles) * (1 - Transfer Efficiency) * (8760 hr/yr) * (1 ton/2000 lb)
Pounds VOC per Gallon of solids = (Density (lb/gal) * Weight % organics) / (Volume % Solids) * Transfer Efficiency
Controlled emission rate = worst case uncontrolled emission rate * (1 - control efficiency)

Appendix A: Emissions Calculations
HAP Emissions
From Surface Coating Operations
Emission Unit 650

Company Name: Phelps Dodge Magnet Wire Company
Address City IN Zip: 4300 New Haven Avenue
Permit Number: 003-6925-00013
Plt ID: 003-00013
Reviewer ERG/RM
Date: 10-24-00

Uncontrolled Potential Emissions

Material	Density (Lb/GAL)	Gal of Mat (gal/unit)	Maximum (units/hr)	Weight % Xylenes (isomers & mixtures)	Weight % Cumene	Weight % Phenol	Weight % Cresols/Cresylic Acid	Xylene Emissions (ton/yr)	Cumene Emissions (ton/yr)	Phenol Emissions (ton/yr)	Cresols/Cresylic Acid Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Polyimide Enamel 97-68-099	8.51	0.035	444	0.18%	0.18%	0.00%	0.00%	1.04	1.04	0.00	0.00	2.09
Formvar Enamel 97-64-635	8.2	0.035	444	20.27%	0.27%	25.00%	18.00%	113.13	1.51	139.53	100.46	354.64
Polyester Enamel 97-72-607	8.8	0.035	444	0.00%	0.00%	0.00%	50.00%	0.00	0.00	0.00	299.49	299.49
Amide-Imide Enamel 97-61-539	8.51	0.035	444	0.30%	0.30%	0.00%	0.00%	1.74	1.74	0.00	0.00	3.48
							Worst Case Uncontrolled Potential to Emit:	113.13	1.51	139.53	100.46	354.64

Controlled Potential Emissions

Material (As Applied)	Destruction Efficiency (%)	Xylene Emissions (ton/yr)	Cumene Emissions (ton/yr)	Phenol Emissions (ton/yr)	Cresols/Cresylic Acid Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Polyimide Enamel 97-68-099	98.00%	0.02	0.02	0.00	0.00	0.04
Formvar Enamel 97-64-635	98.00%	2.26	0.03	2.79	2.01	7.09
Polyester Enamel 97-72-607	98.00%	0.00	0.00	0.00	5.99	5.99
Amide-Imide Enamel 97-61-539	98.00%	0.03	0.03	0.00	0.00	0.07
Worst Case Controlled Potential To Emit:		2.26	0.03	2.79	2.01	7.09

Methodology:
HAPs emission rate (ton/yr) = Desity (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hr/yr * 1ton/2000 lb

Appendix A: Emissions Calculations
HAP Emissions
From Surface Coating Operations
Emission Unit 310
Company Name: Phelps Dodge Magnet Wire Company
Address City IN Zip: 4300 New Haven Avenue
Permit Number: 003-6925-00013
Plt ID: 003-00013
Reviewer ERG/RM
Date: 10-24-00

Uncontrolled Potential Emissions

Material	Density (Lb/GAL)	Gal of Mat. (gal/unit)	Maximum (unit/hr)	Weight % Xylenes (isomers & mixtures)	Weight % Cumene	Weight % Phenol	Weight % Cresols/Cresylic Acid	Xylene Emissions (ton/yr)	Cumene Emissions (ton/yr)	Phenol Emissions (ton/yr)	Cresols/Cresylic Acid Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Formvar C 97-64-360	8.48	0.018	366	1.45%	0.58%	36.00%	12.00%	3.54	1.42	87.85	29.28	122.09
Worst Case Uncontrolled Potential to Emit:								3.54	1.42	87.85	29.28	122.09

Controlled Potential Emissions

Material (As Applied)	Destruction Efficiency (%)	Xylene Emissions (ton/yr)	Cumene Emissions (ton/yr)	Phenol Emissions (ton/yr)	Cresols/Cresylic Acid Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Formvar C 97-64-360	98.00%	0.07	0.03	1.76	0.59	2.44
Worst Case Controlled Potential To Emit:		0.07	0.03	1.76	0.59	2.44

Methodology:
HAPs emission rate (ton/yr) = Desity (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hr/yr * 1ton/2000 lb

Appendix A: Emissions Calculations
HAP Emissions
From Surface Coating Operations
Emission Unit 1071

Company Name: Phelps Dodge Magnet Wire Company
Address City IN Zip: 4300 New Haven Avenue
Permit Number: 003-6925-00013
Plt ID: 003-00013
Reviewer ERG/RM
Date: 10-24-00

Potential Emissions (prior to internal integral catalytic oxidizer):

Material	Density (Lb/GAL)	Gal of Mat (gal/unit)	Maximum (units/hr)	Weight % Xylenes (isomers & mixtures)	Weight % Cumene	Weight % Phenol	Weight % Cresols/Cresylic Acid	Xylene Emissions (ton/yr)	Cumene Emissions (ton/yr)	Phenol Emissions (ton/yr)	Cresols/Cresylic Acid Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Polyester 97-72-680	9.51	0.0019	244	0.20%	0.20%	26.00%	21.00%	0.04	0.04	5.02	4.06	9.15
Polyamide Imide Enamel 97-61-639	8.85	0.00056	244	0.22%	0.22%	0.00%	0.00%	0.01	0.01	0.00	0.00	0.02
Bondable Enamel 97-60-681	8.68	0.0019	244	0.27%	0.27%	35.00%	35.00%	0.05	0.05	6.17	6.17	12.43
Worst Case Potential to Emit prior to internal integral catalytic oxidizer:								0.05	0.05	6.17	6.17	12.43

Potential Emissions (after internal integral catalytic oxidizer):

Material (As Applied)	Destruction Efficiency (%)	Xylene Emissions (ton/yr)	Cumene Emissions (ton/yr)	Phenol Emissions (ton/yr)	Cresols/Cresylic Acid Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Polyester 97-72-680	95.00%	0.00	0.00	0.25	0.20	0.46
Polyamide Imide Enamel 97-61-639	95.00%	0.00	0.00	0.00	0.00	0.00
Bondable Enamel 97-60-681	95.00%	0.00	0.00	0.31	0.31	0.62
Worst Case Potential to Emit after internal integral catalytic oxidizer:		0.00	0.00	0.31	0.31	0.62

Methodology:
HAPs emission rate (ton/yr) = Desity (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hr/yr * 1ton/2000 lb